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Sonographic Correlation of Placenta Previa with Pregnancy Outcomes After 24 Weeks of Gestation

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Abstract
Placenta typically discoid in shape and echogenic (hyperechoic) structure visible on ultrasound. Placenta may be extend to the lateral wall of uterus but normally lies along the anterior and posterior wall of the uterus. The thickness of placenta is 2.0cm to 2.5cm and measuring diameter 22cm. In various times placenta abnormally located along the internal cervical os of uterus which may be partially or fully covered the os that's called placenta previa. Prevalence of placenta previa occurs in approximately 5 per 1000 pregnancies. Prevalence of Placenta previa is rising as a result of increasing rates of LSCS (Lower segment cesarean section). Placenta previa leads many adverse outcomes during pregnancy for both fetus and maternal so it is require follow up scan at term. Objective: The main objective is to estimate the sonographic correlation of placenta previa with pregnancy outcomes after 24weeks of gestation. Methodology: A cross sectional analytical study conducted at Tertiary care Teaching Services Hospital Lahore. Maternal diagnosed with placenta previa after 24 weeks of gestation included and also only singleton pregnancies. Maternal observed with follow up scans throughout term and analyzed perinatal outcomes. GE Logiq S8 Ultrasound machine, with 3.5MHz convex probe used for the evaluation of patients. Results: Total 77 patients. We observed among maternal with high grade (type three and four) placenta previa are highly significant and associated with outcome cesarean deliveries. Then those minimum maternal with low grade (type one and two) placenta previa are not highly significant. Another result we find out those maternal who have previous history of Lower segment cesarean section associated with placenta previa.

Keywords: Ultrasound, Placenta Previa, Cesarean Delivery, Haemorrhage, Normal Vaginal Delivery

Introduction

Placenta involves of vascular tissue in which remaining products can permits in the reverse direction from fetus, oxygen and nutrients can permits from mother's blood into that of the fetus. Placenta previa is the occurrence in which placental tissue which spread over pass the internal cervical os. Due to fetus delivered early as preterm (less than 37 weeks of gestation). Also are some of them stillborn or die early in the neonatal period. Maternal mortality due to antenatal and postnatal haemorrhage that is major causes of both maternal morbidity mortality. Particularly gross bleeding causes by placenta previa. While if effects only 1 in 300-400 deliveries. Definitely neonatal mortality is raised the major cause being premature baby and threefold in pregnancy with placenta previa. Higher incidence of antepartum bleeding in women which having high grade (major) placenta previa in earlier 33 weeks of gestation require blood transfusion, and also with significant of preterm delivery hysterectomy, cesarean delivery than women with low grade (minor) placenta previa. In which the developed placenta partially or fully covers the internal os the cervix of the uterus that's placenta is an obstetric complication. Placenta previa is a serious cause of bleeding in third-trimester that's has been related with worse maternal complications and perinatal outcomes. Peripartum bleeding is the main causes of direct maternal mortality in Asia. Major causes of per partum bleeding are uterine don't be able to contract, placenta previa, abruption placenta. Placenta previa is related with postpartum hemorrhage, deliveries occur before time and fetal growth restriction. Neonatal death and greater rate of premature fetus are also occurring in pregnancies that are complicated by placenta previa. It is still challenging to better perinatal outcomes and minimize maternal complication in women having placenta previa despite to make diagnosis so early, careful observation and advance newborn care. In women with greater maternal age, multigravida, males fetuses previous cesarean section and previous induced or spontaneous abortion that's maternal have increased occurrence of placenta previa observed by epidemiological and clinical studies however causes of low lying remains obscure. Furthermore, mother use drug and having habit of smoking that's behavioral factors behavioral factors that have been include with the increased risk of placenta previa. Finally, women have higher incidence of placenta previa that's with a history of low lying placenta in previous pregnancies. The previous studies shows placenta previa rate of prevalence is vary greatly in women which have previous predisposing risk factors. The prevalence rate of placenta previa and its relation with various harm factors estimated by systematic review of literature so we performed this study. To assess the strength and extent of the correlation of placenta previa with these harm factors so conduct a meta-analysis and also for as well as to identification the sources of heterogeneity across these studies. The prevalence of Placenta previa follows at around 5 per 1000 pregnancies. With cumulative rates of LSCS (Lower segment cesarean section) so as result the prevalence of placenta previa increased. In Austria the caesarean section frequency has increased from 22 to almost 30 percent in last decade. Such abnormal Placental location has been detected to be connected with previous cesarean section.

Ultrasound is a useful modality chooses for diagnosis of placenta previa. With the bladder half- full were performed Tran's abdominal ultrasound and distance measure between the internal cervical os and lower edge of placenta. With empty bladder performed Tran's vaginal ultrasound. Only singleton pregnancies included in study and after 24 weeks gestation. Based on ultrasound conclusion the grade of placenta previa was classified. Ultrasound is non-invasive, inexpensive, portable and easy to use imaging modality. It has no potential of bio effects for baby and mothers. So, it is justified to use ultrasound as a first-line modality for the evaluation of fetal and extra-fetal structures in the female pelvis during pregnancy. Ultrasound can prudently be used in the evaluation of placenta previa and resultant pregnancy outcomes. In recent years ultrasound scanning has managed to exact localization of the placenta. New research on abnormal position of placenta advices individualized approach to progress delivery timing. It was also suggested by some authors that patients with placenta previa should take complete bed rest and checkup regularly throughout pregnancy to minimize adverse outcomes.

Methods

A cross sectional analytical study was conducted at Tertiary care Teaching Services Hospital Lahore. Our sample size was 72 patients additional 10 percent included total 77patients were included after the approval of synopsis from an institutional review board (IRB). Women diagnosed with Placenta previa after 24 weeks of gestation included and also only singleton pregnancies. Maternal observed with follow up scans throughout term

and analyzed perinatal outcomes. GE Logiq S8 Ultrasound machine, with 3.5MHz convex probe used for the evaluation of patients. The probe positioned on all parts of the uterus until the distance between internal cervical os and lower edge of placenta detected. The distance must be 3cm or less. The accurate measurement between them and location of placenta increase the rate diagnosis of placenta previa, induction of labor and fetal outcomes.

Figure 1: Image 1st shows 30 yrs. pregnant women their fetus biparietal diameter 7.90cm corresponding to Gestational age 31 weeks 5 days. Image 2nd shows Grade four Placenta previa (which completely covering the internal cervical os)

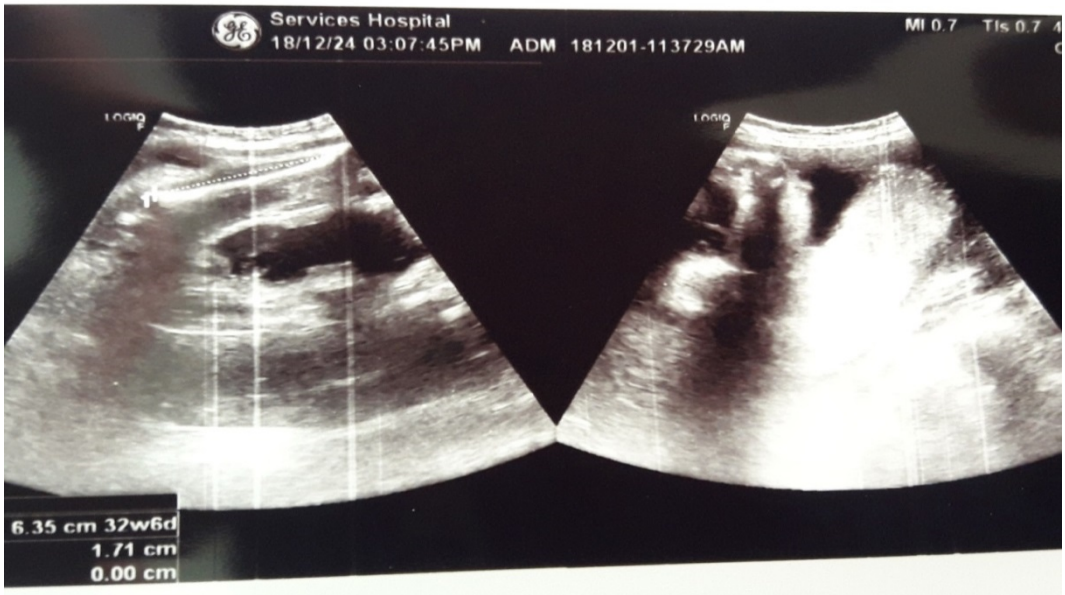


Figure 2: Image 1st shows 33 yrs. old pregnant women their fetus Femur length 6.35cm corresponding to Gestational age 32 weeks 6 days. Image 2nd shows Grade three Placenta previa (which fully covering the internal cervical os)

Results

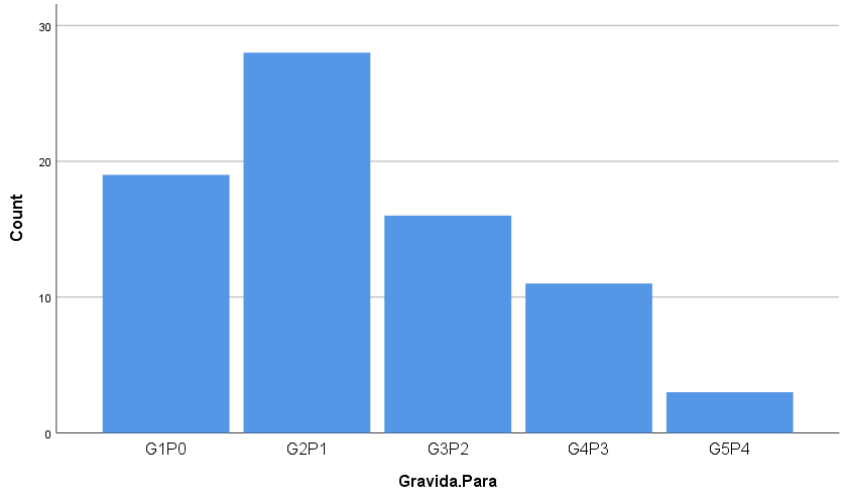
Total 77 patients included in this study which all patients (pregnant women) have placenta previa (low lying placenta). Major results find out Lower segment cesarean section (2.6%) and Normal vaginal delivery (14.3%) in Low grade (One and Two grades) placenta previa. In High grade (Three and Four grades) placenta previa have Lower segment cesarean section (80.5%) and Normal vaginal delivery (2.6%). The relation of outcome with

High-grade placenta previa includes type three and four were highly significant with p-value 0.000 < 0.05. Total count of patients with in grades of placenta previa Lower segment cesarean section (83.1%) and Normal vaginal delivery (16.9%). Another result find out previous history of Cesarean delivery associated with placenta previa. In this study frequencies obtain G1P0 (24.7%) G2P1 (61.0%) G3P2 (81.8%) G4P3 (96.1%) G5P4 (100%).

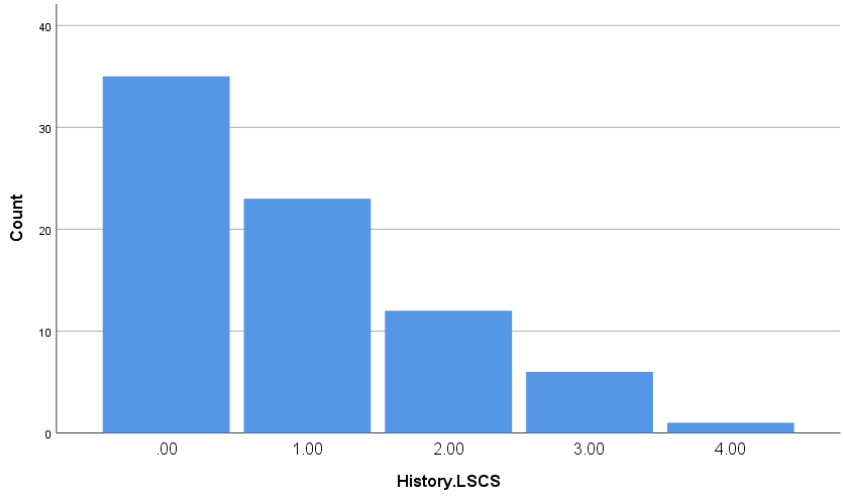
Table 1: Grades Placenta Previa * outcomes LSCS (Lower segment cesarean section) and NVD (Normal vaginal delivery) Cross tabulation

			Outcomes		
			LSCS	NVD	Total
Grades PP	One and Two grades of Placenta Previa	Count	2	11	13
		% within Grades Placenta Previa	2.6%	14.3%	100.0%
	Three and Four grades of Placenta Previa	Count	62	2	64
		% within Grades Placenta Previa	80.5%	2.6%	100.0%
Total		Count	64	13	77
		% within Grades Placenta Previa	83.1%	16.9%	100.0%

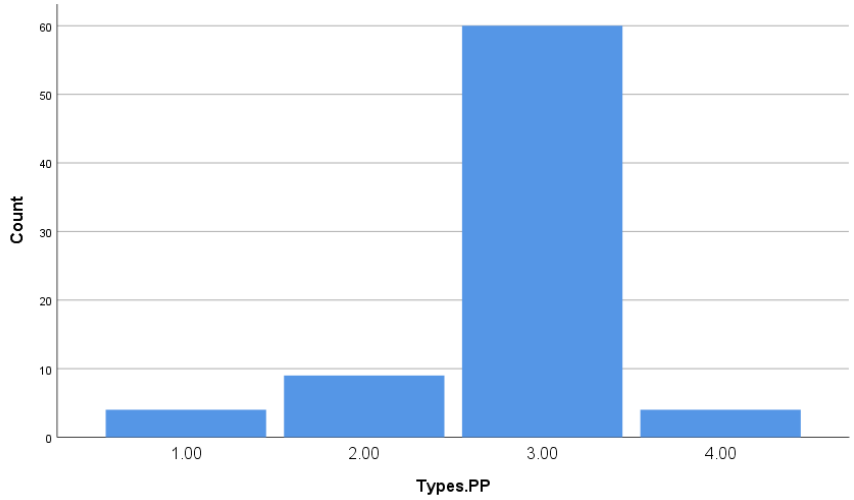
Graph 1:



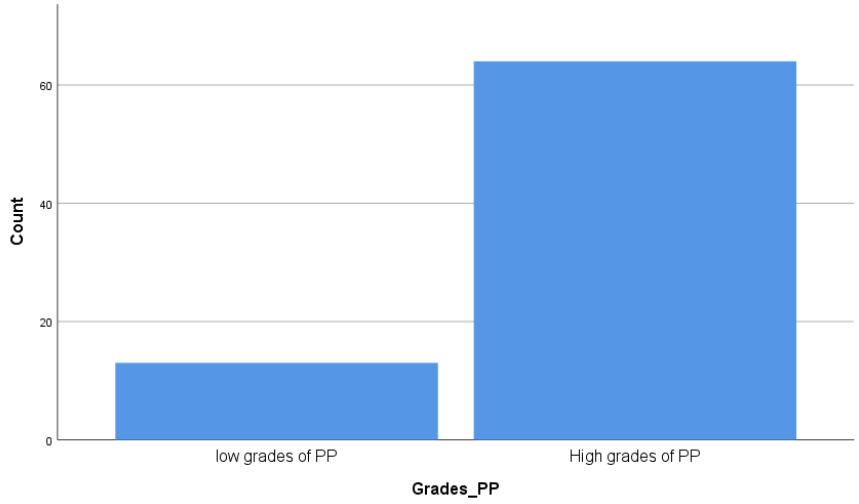
Graph 2:



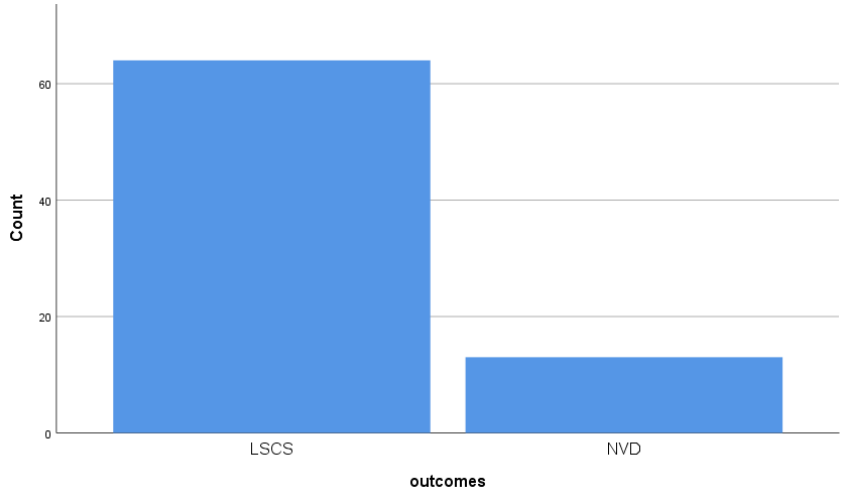
Graph 3:



Graph 4:



Graph 5:



Discussion

It was a cross sectional analytical study. The objective of this research work was to observe the role of ultrasound in assessment of placental location during pregnancy and its relation with adverse outcomes in services hospital Lahore, City population. Ultrasound technique is useful to detect the accurate location of placenta such as low lying placenta etc. Most of cases in women have placenta encroaching and covering the internal cervical os in 2nd trimester of pregnancy although raised as soon in 3rd trimester of pregnancy. However some of cases have placenta previa and not raised at the term. In which follow up sonographic scans necessary so minimize adverse outcomes. On ultrasound placenta showed as hyperechoic structure along the myometrium layer of uterus cyst. In those cases placenta raised and not happened any adverse outcomes. But in which placenta remained attached with the internal cervical os and cover it conducted caesarean delivery.

Hyunjin Cho in (2017) studied on placenta previa and its risk factors involve antenatal bleeding. From January 2012 to December 2014 analyzed maternal outcomes by retrospectively study. In Haeundae Paik Hospital, Inje University at the department of obstetrics and gynecology noted women who delivered by placenta previa. Those pregnancies were included which only singleton. At this conclusion using obstetrical history and sonographic finding in cases placenta previa for estimation of antenatal bleeding is difficult.

Martina Koll Mann et al (2015) studied in Placenta Previa occurrence of harm factors and consequences. We accomplished a study on occurrence rate and risk factors of maternal, neonatal in pregnant women with low lying placenta in our organization and province denoting hospital. Between March1993 to October 2012 this study conducted. Data were collected in a resolution of calculated database from 1993-2003 in a tertiary referral hospital. A worse outcome maternal (34.15%) and neonatal (60.06%) was related with placenta previa. At the concluded by placenta previa was related with differences concerning risk factors neonatal and maternal outcome.

In different type of placenta previa with pregnancy outcomes and risk factors studied by Ahmed- Bahar in (2008). From January 1, 1996 to December 31, 2005, which covering period 10 year of women self-confessed to the obstetric unit a referral teaching hospital in Abha General Hospital of Saudi Arabia that retrospectively studied. The transabdominal or transvaginal ultrasound scanning used for confirmation the accurate location of placenta in cases of placenta previa and make decision cesarean section. The obstetrician was performed ultrasound examination. In the study included only singleton pregnancies after 24 weeks gestation. Women who were diagnosed with Placenta previa and admitted to hospital and managed whether symptomatic or not, to be admitted to hospital and managed predictably up to the 38th week of pregnancy needed by hospital policy. In that patients required a crucial indication for delivery. At the conclusion the complete and partial Placenta previa is related with developed morbidity than the maternal with marginal placenta previa.

Conclusion

Although in all types of placenta previa cause high-risk pregnancy however, we observe among maternal with high grade (type three and four) placenta previa are highly significant and associated with outcome cesarean deliveries. Then those minimum maternal with low grade (type one and two) placenta previa are not highly significant because in females placenta raised its proper location and conducted normal vaginal delivery. Another result we find out those women who have previous increasing rates of Lower segment cesarean delivery is associated with high grades of placenta previa and conducted Cesarean delivery.

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Correlation Between Cataract Surgery and Anxiety Levels in Senile Cataract Patients

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Abstract
Background: Cataract may cause decrease of vision due to clouding of the lens. Poor vision and surgery caused by cataract may also result in an increased risk of anxiety and depression. Purposes: to determine the correlation between cataract surgery and anxiety levels in patients who will undergo cataract surgery. Methods: This is a cross-sectional study design and conducted according to the Declaration of Helsinki and was approved by the local ethical committee amongst the senile cataract patients. The data were analyzed by using spearman's rank correlation test to find the correlation between cataract surgery and anxiety level. The sampling method was purposive sampling. The Hamilton Anxiety Rating Scale (HAM-A) or HRS-A (Hamilton Rating Scale for Anxiety) was used to rate the severity of patient's anxiety. Results: A number of 63 cataract patients who will undergo cataract surgery were included for analysis and have been interviewed to get the anxiety level by using HAM-A. The most age of patient was 50-59 years old (29;46%). The stage of the senile cataract was mostly the mature stage of about 36 patients (57.1%). From HAM-A questionnaire the most anxiety level of senile cataract patients who will be operated was moderate level (49;77,8%). Spearman's rank correlation test with SPSS 17 obtained p = 0.002 with sig (2-tailed) value < 0.05 and correlation coefficient r = 0, 383. Conclusion: There is a correlation between cataract surgery and anxiety levels in senile cataract patients who will undergo cataract surgery.

Keywords: Senile Cataract, Cataract Surgery, Anxiety Level, Hamilton Anxiety Rating Scale

Introduction

Cataract is the condition when the transparency loss from the lens and begins to opacify that may affect the vision. It is the world's leading cause of treatable blindness. Cataract can affect all humans due to the physiological aging process. Senile cataract is the most prevalent type in adult with the onset started at the age of 45 to 50 (Murthy G et al., 2008; Tsentalovich Y et al., 2015)

Senile cataract is an age-related cataract, characterized by gradual progressive thickening of the lens. The clinical staging of senile cataract may be divided as, incipient cataract, immature cataract, mature cataract and hypermature

cataract. Surgical extraction is the only available treatment for cataractous lens (Limburg H et al., 1999; Foggitt P, 2001). Anxiety in surgical patients is a well-known preoperative sentiment, and is present regardless of perceived intrusiveness of the operation. Indeed, one manifestation of this anxiety, the fear of death, predominates patient concerns irrespective of whether the patient undergoes major or minor surgery (Limburg H et al., 1999). Some studies indicate that cataract patients may have anxiety before surgery, during surgery and after surgery (David A et al., 2017). [Patient with cataract often got anxiety preoperatively not only due to the technique and the anesthesia administration but also becoming blindness after cataract surgery (David A et al., 2017; Foggitt P, 2001).

Methods

This is an observational analytic study with cross-sectional design. The study was conducted on all senile cataract patients who were registered as patients undergoing cataract surgery, and diagnosed as a senile cataract at Handayani Kotabumi Hospital in North Lampung in the period of May to July 2018. The data from 63 respondents were collected using purposive sampling method. The Hamilton Anxiety Rating Scale (HAM-A) was used to rate the severity of patient's anxiety. HAM-A is a clinician rating scale that assesses the severity of predominantly biological and behavioral symptoms of anxiety, by using psychological questionnaire. To implement the HAM-A scale, the scale has been translated into Bahasa (Indonesian language) to make the participants easy to understand, take approximately ten to fifteen minutes to administer, and under the supervision of a psychiatrist. To implement the Hamilton Anxiety Rating Scale, the acting clinician proceeds through the fourteen items, and for the evaluation, the clinician compiles a total, composite score based upon the summation of each of the 14 individually rated items. This calculation will yield a comprehensive score in the range of 0 to 56. It has been predetermined that the results of the evaluation can be interpreted as follows. A score lower than 14 indicates no anxiety. A score from 14 to 20 indicates mild anxiety. A score of 21 to 27 indicates moderate anxiety. A score from 28 to 41 indicates severe anxiety. Lastly, a score of 42 to 56 indicates panic attack.

Results

Data collection is done within 2 months by following a predetermined operating schedule. Data collection techniques for anxiety were carried out by using the Hamilton Rating Scale for Anxiety (HRS-A) questionnaire. The characteristics of respondents are based on age, cataract stage, and anxiety level. Based on age, participants taken as respondents are those aged 50 years and above. And then the researcher conducted an interview based on the questionnaire.

A total of 63 cataract patients who will undergo cataract surgery met the inclusion criteria to be participants. From this study, the most common age of group was the age of 50-59 years (29; 46 %), followed by the age of 60-69 years (19; 30,2%)

Table 1. Distribution of participants, based on the age

Age (Years)	Frequency	Percentage(%)
50-59	29	46
60-69	19	30,2
70-79	11	17,5
≥ 80	4	6,3
Total	63	100

Table 2. Distribution of participants, based on the gender

Sex	Frequency	Percentage(%)
Male	14	22,2
Female	49	77,8
Total	63	100

From table 2 the most participants who get anxiety preoperatively are female (49;77,8%). Only 14 males suffering anxiety during this study. Woman tend to experience anxiety more often than men in this study.

Tabel 3. Distribution of participants based on the stage of senile cataract

Senile Catarct Stage	Frequency	Percentage (%)
Immature	5	7.9
Mature	36	57.1
Hypermature	22	35
Total	63	100

From table 3 the most participants who will undergo cataract surgery is those who diagnosed as a Mature cataract (36; 57.1%), followed by hypermature cataract stage (22;35%)

Table 4. Distribution of participants Based on Anxiety Level

Anxiety Level	Frequency	Percentage (%)
Mild	14	22.2
Moderate	49	77.8
Total	63	100

From table 4. The most anxiety level amongst the participant is moderate level (49;77,8%) level. From this study, there is no one amongst the participants get the severe anxiety and very severe anxiety or panic attack.

Tabel 5. Distribution of Anxiety Levels amongst the Senile Cataract patients

Senile Cataract Stage	Anxiety Level							
	Mild		Moderete		Severe		Total	
	N	%	N	%	N	%	N	%
Immature	2	40	3	60	0	0	5	100
Mature	12	33,3	24	66,7	0	0	32	100
Hypermature	0	0	22	100	0	0	22	100
Total	14		49		0		63	

We conducted this study at the time the patients firstly diagnosed as a cataract and agreed to undergo surgery. The participants with immature cataract experienced more to get anxiety in moderate level (3;60%) rather than mild level (2;40%). In the mature cataract stage, which has more moderate levels of anxiety than mild anxiety levels (24:66.7%). All the participants with hypermature cataract experienced with moderate anxiety (22;100%).

Table 6. Statistical analysis correlation between Anxiety Levels and Senile Cataract Patients

		Senile Cataract Stage	Anxiety Level	
Spearman's rho	Senile Cataract Stage	Correlation Coefficient	1.000	.383**
		Sig. (2-tailed)		.002
		N	63	63
	Anxiety Level	Correlation Coefficient	.383**	1.000
		Sig. (2-tailed)	.002	
		N	63	63

**. Correlation is significant at the 0.01 level (2-tailed).

Spearman rank correlation test, based on the above data can be seen that after the rank spearman correlation test with SPSS 17 obtained p = 0.002 with a sig (2-tailed) value <0.05 found a significant correlation between the

variables associated with the senile cataract stage variable with anxiety level. The correlation coefficient r =0, 383 which indicates that the relationship between stages of cataract with anxiety level has a positive or unidirectional value which means that the higher the stage of senile cataract, the higher the level of anxiety.

Discussion

Senile cataracts may cause irreversible blindness. Blindness of cataract is curable by simple surgical procedure. Surgical can have an effect on anxiety in some individuals, especially in developing country populations. Some studies on patients undergoing surgery, anxiety and depression often reported especially in patients who planned elective surgery (Theunissen M et al., 2012; Rodin G and Voshart K, 1986; Valenzuela M et al., 2010). Severe level of anxiety in elective patients are almost experienced, almost all patients are afraid of magnitude of operation, anesthesia and postoperative pain (Lee D et al., 2004; Klopfenstein et al., 2000; *Anna R et al., 2016*). From this study, all the participants were the patients who planned elective cataract surgery. From this study, no severe anxiety level in senile cataract patients who will undergo surgery because all participants know that surgery was the best management so that they could return to see clearly. Even some of the participants had undergone previous cataract surgery on the opposite side of the eye, so they already knew that cataract surgery was not something to worry about too much. In this study we found a correlation between cataract surgery and anxiety levels in senile cataract patients. This study also showed that the higher the age, the better the level of one's emotional maturity and ability to deal with various problems, including anxiety. Different from previous study that age showed no relation to the level of anxiety (*Nijkamp M et al, 2004).* In accordance with former studies woman experienced higher of anxiety level than men (**Spielberger C**, 1995; **Spina J,** 1984; Ezkin E, 2017). Many researchers have previously looked for the factors that might be reduce anxiety facing surgery. Previous studies did not find any relationship between music and anxiety (Allen K, 2001; Cruise J, 1997). Actually, anxiety facing the surgery will be avoided by providing clear information about the aim of the operation. In accordance with former study, the structured and clear preoperative instructions will decrease the level of anxiety amongst the patient that will undergo cataract surgery (Cruise J, 1997; Morrell G, 2001) However, patient education should include information about visual perception during the procedure and patients should be accompanied by their families or partners at the time of giving information, so that they providing social support to the patients and may relieving the unnecessary distress. The lack of this research is that, all participants are patients who will undergo cataract surgery without distinguishing the surgical technique that will be undertaken. Considering the difference in surgical technique may probably cause different levels on anxiety. Future research should therefore not only illustrate in anxiety level between the different surgical technique but also examined differences in anxiety levels before and after cataract surgery.

Conclusion

Anxiety is a natural feeling and commonly occurrence in every human being. Anxious feelings about surgical procedures, pain, and anaesthetic are almost found in every patient who will undergo cataract surgery. By giving a good informed consent, clear information and good education will reduce the patient's anxiety level.

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Primary Hyperparathyroidism Revealed by a Brown Tumor of the Maxilla: A Case Report

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Abstract
Introduction: Brown tumors are osteolytic lesions that rarely reveal hyperparathyroidism. They usually occur at the terminal stage of primary or secondary hyperparathyroidism. We report the case of a patient with primary hyperparathyroidism revealed by a jaw's tumor, at the ENT and Maxillo-facial department of Mohamed VI University Hospital, Oujda, Morocco. Case report: A medical examination of A 48-year-old woman with a left nasal obstruction associated to an ipsilateral tumefaction progressively increasing in size. The CT scan showed an aggressive osteolytic process of the maxillary sinus. The diagnosis of the brown tumor was suspected on a biological assessment highlighting an hypercalcemia. Etiological research has revealed a parathyroid adenoma. The parathyroid hormone test: 322 pmol / L confirmed the diagnosis. The surgery consisted of a conservative lumpectomy with left parathyroidectomy. The anatomopathological result showed a benign giant cell tumor of the maxillary sinus. Conclusion: We recall through this observation, and view to the insidious side of brown tumors, two essential points: the difficulty of establishing the diagnosis of osteolytic processes of the maxillary sinus and the need to think about an hyperparathyroidism in front of a giant cell lesion.

Keywords: Maxillary Sinus, Brown tumor, Hyperparathyroidism

Introduction

The Brown tumor of the jaw is a lesion that affects patients with hyperparathyroidism. She appears as an expansive osteolytic lesion, mostly affecting the mandible, ribs, pelvis and femur. Maxillary involvement is exceptional. In 81% of cases, the tumor is due to an adenoma of the parathyroid gland. Sometimes, it is the result of a chronic renal failure. This tumor is usually painful with a slow growth and it can become aggressive and destructive (Ercihan Guney 2001).

In the maxillofacial region, this tumor is painful, difficult to palpate, can take a large volume and thus deform the bone, leading to a masticatory gene. This work describes a clinically and histologically diagnosed case of brown tumor that was located in the left maxillary sinus.

The aim of this work is to remind endocrinologists and maxillofacial surgeons that these tumors should be taken into account (Ercihan Guney 2001).

Case report

A 48-year-old patient, admitted for painful tumefaction of the left cheek, gradually progressing during the last 6 months. This tumefaction is associated to a nasal obstruction, without epistaxis or other ocular symptomatology. The clinical history does not include any personal or family history of endocrinopathy.

The clinical examination revealed facial asymmetry due to a large hard gingival-maxillary mass, filling the left upper vestibule and deforming the hard palate. The rest of the somatic examination did not reveal any abnormalities, including no adenopathy or bone pain. Nasofibroscopy revealed a huge mass filling the entire left nasal cavity without alteration of the pituitary mucosa.

Computed tomography showed osteolytic tissue mass, heterogeneous with numerous calcifications, centered on the left maxillary sinus measuring 50 / 40 mm, extending into the ipsilateral nasal cavity with involvement of the nasal septum. At the top, it lyses the floor of the orbit. At the bottom, it lyses the hard bony palate, which is prominent into the oral cavity. The anterior extension has passed the anterior bone wall of the maxillary sinus and extends to the soft parts [Fig. 1].

In front of these radiological data "osteolytic image", a biological assessment was carried out; the result indicates coexistence of hypercalcemia at 126 mg / L and hypophosphoremia at 21 mg / L. Alkaline phosphatase value was 217 U / L whereas the normal value is 30 - 100 U / L. The renal status (urea, creatinine) and protidemia were without abnormality.

Biologic exploration confirmed the diagnosis of primary hyperparathyroidism, initially expressed by a brown tumor of the maxilla, leading to an etiologic investigation. In addition, cervical sonography revealed a nodule strongly suggestive of a parathyroid adenoma in the left thyroid lobe [Fig. 2].

The bioassay of PTH indicated a high value of 322 pmol / L while the normal values have to be from 9 to 55 pmol / L. Thus, the removal of the parathyroid adenoma was performed. In parallel the anatomopathological report revealed a parathyroid adenoma.

The patient underwent a transfacial left medial maxillectomy [Fig. 3]. The removal of the tumor is performed in one piece followed by a histopathological study returned in favor of a benign tumor with giant cells of grade II. The post-operative blood check shows that calcemia and phosphoremia have returned to normal state. Five months later the Parathyroid hormone (PTH) assay shows normal value of 33 pmol/L.

Discussion

Currently, hyperparathyroidism is present in 75 to 80% of cases during asymptomatic hypercalcemia. It can also be revealed by renal failure in the terminal stage or by cardiovascular disorders. Bone manifestations of hyperparathyroidism: bone cysts, osteoporosis, sub-periosteal résorption and brown tumors are the late expression of the disease. These signs are few and occur in 5 to 15% of cases. In addition, it is exceptional that a brown tumor represents the first and only clinical sign of hyperparathyroidism. The reported incidence of these hyperparathyroidisms is 1.5 to 1.7% in secondary hyperparathyroidism and 3% in primary hyperparathyroidism (Meredith N 2002).

Most hyperparathyroidism cases are secondary to a primary hyperparathyroidism. This results from 80% of cases of parathyroidian adenoma, and more rarely of hyperplasia (15 %).

Primary hyperparathyroidism frequently affects patients over the age of 50, especially postmenopausal women, with a predilection for the female sex in benign hyperparathyroidism. Brown tumors can affect the entire skeleton. The most frequent locations are pelvis, flank, femur, mandible and hands. The maxillary localization is extremely rare.

Clinically, the severity of the symptoms depends on the size of the process and its location. Indeed, the brown tumour has no distinctive clinical features of other maxillary processes. It is generally in form of a jugal, palatal and/or gingival bone tumefaction with distortion and asymmetry of the face, pain and mobility, and even a fall of the teeth. The diagnosis is made fortuitously after a routine radiological examination (Meredith N 2002).

Radiologically, it is manifested by monogeodic or multilocular bone lysis with unspecified limits. This lysis is often responsible for a cortical rupture and can, therefore, suggest a malignant aspect. The CT scan showed a mass of tissue nature, taking the product of contrast and a perfect respect of the soft parts. The maxillary sinus is often filled with an intra-sinusal mass appearance. Standard radiographs of the skeleton let searching for other locations and looking for a renal lithiasis. Furthermore, other radiological manifestations of hyperparathyroidism include sub-periosteal resorption that are usually localized at level of the phalanges (C. Heimburger 2013).

It's known that cervical ultrasound and computed tomography are necessary to detect parathyroid lesions caused by hyperparathyroidism. CT after technetium injection (Tc - 99 m) is the best way to detect lesions in the parathyroid glands or ectopic tissue before surgery. In a 20-year retrospective study of 32 giant bone cell lesions, seven were located in the region of the head and neck. Four out of seven were giant cell granulomas, the remaining three were true giant cell tumors, which illustrates the exceptional character of the brown tumour. Thus if based only on histology data, the distinction between the Brown tumor and other giant cell lesions is not evident. Indeed, brown tumors are secondary to non-pathognomonic histological changes that can also be seen in a giant cell granuloma, an anevrysmal cyst or in fibrous dysplasia. The clinical history and the results of the phosphocalcic assessment are, therefore, essential, in particular the increase of the parathyroid hormone, to make the diagnosis (C. Heimburger 2013).

It is important to note that brown tumors are non-neoplastic lesions, without malignant potential, in comparison with giant cell tumors that are susceptible to malignant transformation with eventual lung metastases. The reparative granuloma is a quite different lesion from the brown tumor; it is a kind of tumor that affects young population. Mechanism of pathogenesis remains unknown, however, some authors define trauma as a triggering factor (Mohammed Farouk 2017).

It is important and logical to consider that the treatment of hyperparathyroidism should be the first step in the management of these patients. It is generally accepted that parathyroidectomy is the treatment of choice for primary hyperparathyroidism, but the management of bone lesions is not codified. Indeed, the evolution of Brown tumors after the parathyroidectomy is variable depending on their composition. Most of the authors believe that the spontaneous regression of these lesions is possible after the correction of hyperparathyroidism, without lytic bone lesions. According to some authors, the complete disappearance of the lesion was found six months after the treatment of hyperparathyroidism. Other authors reported that spontaneous bone regeneration might take several years to restore normal facial morphology (Mohammed Farouk 2017).

When the destructive lesions affect the function of an organ, the tissue lesions produced cannot be repaired despite obtaining a normal rate of calcemia. In these situations, when the lesions persist after treatment of hyperparathyroidism or continue to develop despite hormonal control, there are various recommendations. In this regard, Yamazak proposes the enucleation and the curettage of the tumor, however Cicconetti, recommends surgical excision of the tumor to stop bone destruction, followed by a second operation, parathyroidectomy, to suppress secretion of parathyroid hormone (A. Henry 2018).

Conclusions

A brown tumor rarely reveals a state of hyperparathyroidism. The main problem is to eliminate other osteolytic lesions. The presence of giant cells must evoke the diagnosis of a brown tumor and a hormonal assessment is

needed to look for hyperparathyroidism. The treatment is based on parathyroid adenoma surgery to avoid operating the tumor, which usually regresses after a parathyroidectomy (F. Antin 2018).

Figure 1: Computed tomography scan of maxilla. Soft tissue mass involving the left maxilla

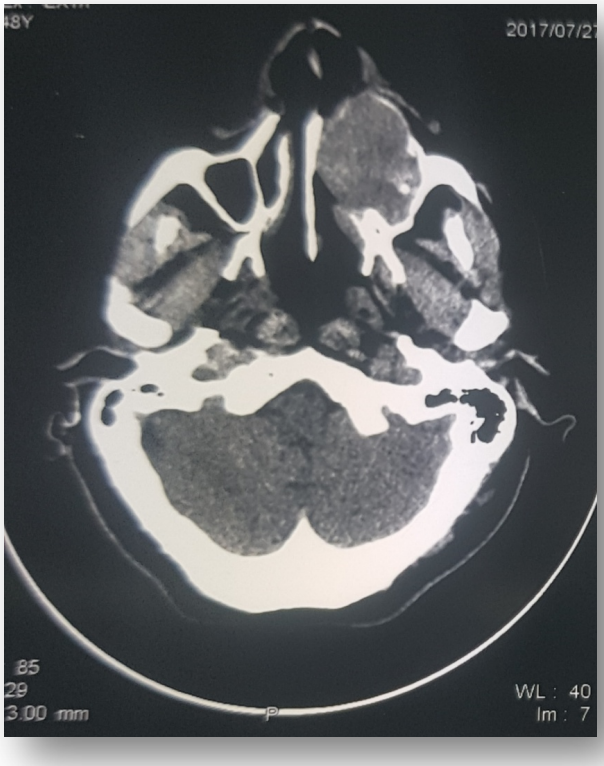

Figure 2: Cervical sonography showing a parathyroid adenoma

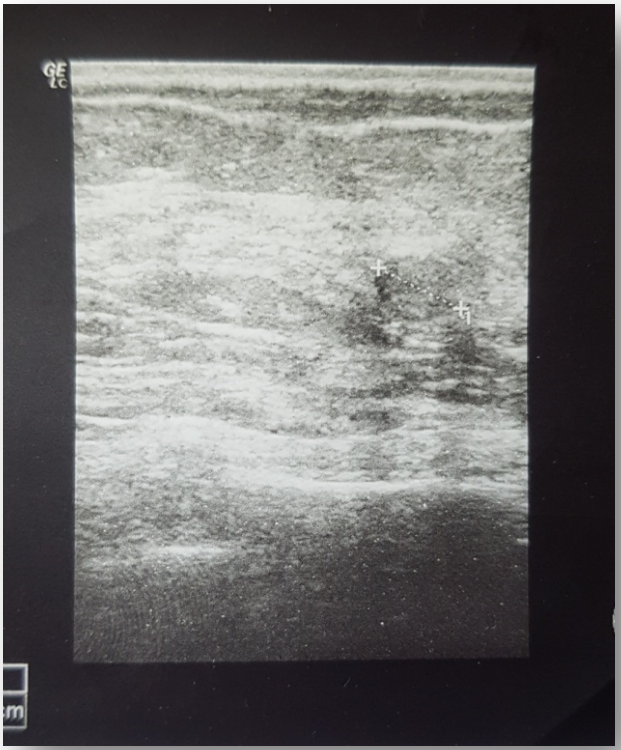

Figure 3: Transfacial left medial maxillectomy.

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Alcohol, Smoking, Wellbeing and Health and Safety of Workers

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Abstract
Health effects of smoking and alcohol consumption are well-documented, but further research about associations with the wellbeing of workers is required. The WHO stated that there is more to health than the absence of disease and such an approach leads to an increased emphasis on wellbeing and quality of life. The approach to wellbeing adopted here is to consider it in a holistic way which covers health, functionality and affective states. The present study involved a survey of 1392 public sector workers from South Wales, UK (74.3% female; mean age: 43.3 years, range 17-72 years). 39.3% of the sample were smokers (mean number of cigarettes a day = 11.28, range 1-40). The average weekly alcohol consumption was 9.2 units with a range of 0-100. 32.3 % consumed more than the recommended safe level (> 14 units), and 18.4% were non-consumers. Multi-variate analyses, adjusting for established predictors of the outcomes (demographics, job characteristics and psychosocial factors) showed that smokers reported more job satisfaction, had fewer injuries but had more health problems (mostly respiratory). The interaction between smoking and level of alcohol consumption was not significant. Alcohol consumption showed two different profiles of effects. Higher alcohol intake was associated with more risk-taking and cognitive failures at work. In contrast, consumption of alcohol below the recommended safe threshold (14 units/week) was associated with higher job satisfaction, fewer physical symptoms and reduced fatigue and depression. Further research using longitudinal or intervention designs is now required to elucidate underlying mechanisms and practical implications of smoking and drinking alcohol.

Keywords: Smoking, Alcohol, Workers, Health, Safety, Wellbeing

Introduction

The harm caused by the consumption of alcohol is a high priority public health problem (Bell & Britton, 2014; WHO, 2012). The effects of smoking on health have also received considerable attention (Department of Health, 2014). However, research is required to increase our knowledge about the effects of alcohol and smoking on wellbeing, and the objective of the present study was to examine whether smoking and alcohol consumption were associated with wellbeing and health and safety outcomes when the established predictor variables were co-varied.

Approximately 20% of the UK population are smokers (HSCIC, 2013), with the highest number of smokers being in the 20-24 year age group (HSCIC, 2012). The prevalence of smoking has fallen from about 40% in the 1980s to about 20% (HSCIC, 2013). Those who smoke often report lower satisfaction with their jobs, financial

conditions, non-working activities, friendships, family life, health and physical condition than those who do not smoke (Oshio & Kobaayshi, 2009). Non-smoking males have been found to have higher levels of wellbeing than men who smoke, and women who never smoked had higher levels of wellbeing than women who had smoked in the past (Chanfreau et al., 2013). Smokers often report increased levels of anxiety (Annual Population Survey, 2012), and there is some evidence of a causal link between the two in that quitting smoking can reduce anxiety, with those who have clinically significant levels of anxiety and those who smoke to reduce their stress showing the largest effect (McDermott et al., 2013). Smoking is highly correlated with poor mental health in general, with about 30% of those with mental health problems being smokers (McManus et al., 2010). Some of these associations may reflect reverse causality, with mental health influencing smoking rather than the other way around. There are many correlated attributes of smoking, such as employment status, social class, salary, and smoking status of family and friends (Twigg et al., 2000). A number of these variables are also associated with people's wellbeing levels, and they must be adjusted for when examining associations between smoking and wellbeing.

Findings from the General Lifestyle Survey (Office for National Statistics, 2013) showed that the number of adults exceeding 3or 4 units of alcohol on at least one day a week was higher for men (34%) than for women (28%). This gender difference was also observed for numbers drinking above recommended safe levels. A person's drinking habits often reflect those of their friends and family (Rosenquist et al. 2010). Alcohol is an established risk factor for depression, and some research has shown that up to 10% of male depression is related to alcohol consumption (Jane-Llopis & Matysina, 2006). However, moderate levels of alcohol consumption are associated with lower susceptibility to disease (Cohen et al., 1993), better cognition, higher levels of subjective wellbeing and fewer depressive symptoms, when compared with total non-consumption (Lang et al., 2006). Indeed, moderate consumption is associated with greater sociability and can be associated with higher levels of wellbeing.

A holistic approach to wellbeing was adopted here (Smith, 2011a, 2011b, Smith & Wadsworth, 2011, and Williams & Smith, 2012). This approach, first described in detail by Smith (2005a), developed from the realisation that there is more to being healthy than being free from disease. Research on smoking and alcohol consumption has often investigated associations with different types of disease, but there have also been studies relating these health-related behaviours to both physical and mental functions. Such research often uses different conceptual approaches. For example, "well-being" is sometimes replaced by the term "quality of life" or by "being able to function well" or "reporting a positive mood state". The relationship between alcohol consumption and both negative and positive mental health has also been examined, often indicating subtle changes in mood rather than the presence of clinical conditions. This holistic approach can be applied across the life-span with different functions receiving attention at certain ages (e.g. education outcomes in adolescence; performance at work in adults; and cognitive decline in the elderly).

A problem with many of the previous studies in this area is that they have not controlled for the effects of correlated attributes of both the wellbeing outcomes and health-related behaviours. Two recent studies have considered wellbeing as a process and examined the effects of smoking and alcohol consumption on the wellbeing and attainment of students (Smith, 2019a, 2019b). In these studies, established predictors of wellbeing and attainment were statistically controlled. Smith (2019a) examined associations between smoking, well-being and academic attainment. Univariate analyses showed that smoking was associated with lower attainment and greater negative wellbeing (stress, anxiety and depression). When established predictors of well-being were included in the analyses, smoking still had a significant effect on attainment but not negative well-being. Another piece of research, using this approach, then considered smoking and alcohol consumption (Smith, 2019b). Three studies examined associations between alcohol consumption, smoking, academic attainment and wellbeing of university students. The first study examined associations with the frequency of consuming alcohol, consumers versus non-consumers, alcohol units per week, and drinking more than the recommended safe level. When established predictors of attainment and wellbeing were included in the analyses, smoking was still associated with academic attainment but not with wellbeing. There were no significant effects of the alcohol frequency or amount variables, and no significant interactions between alcohol group and smoking. Non-consumers of alcohol reported greater work efficiency but higher negative outcomes. Consumption of more alcohol than the recommended safe limit was associated with lower positive well-being, lower course stress, and lower work efficiency. A smaller study examined associations with binge drinking. There was only one significant effect, with those who never engaged in binge drinking reporting greater work efficiency than the infrequent binge drinkers, who in turn reported greater

work efficiency than the regular binge drinkers. A third study examined associations between frequency of hangovers, attainment and wellbeing. Again, the only significant effect was on work efficiency, with those who never had a hangover being more efficient than those who sometimes had a hangover who were more efficient than those who regularly had a hangover.

The chronic effects of smoking or consuming alcohol may be difficult to detect in student samples because they have only carried out these behaviours for a relatively short time. The present study involved a survey of a sample of workers who had been smoking and drinking alcohol for a longer time. The outcomes studied here were also different from those used in the student samples. Health outcomes were recorded, and it was predicted that higher consumption of alcohol and smoking would be associated with poorer health. Safety outcomes (accidents, injuries and errors) were also reported, and the literature suggests that alcohol consumption may be a risk factor for reduced safety. Mental health problems (stress, fatigue, anxiety and depression) were also recorded, as were job satisfaction and enjoyment. Correlated attributes of smoking, alcohol consumption and the outcomes were also measured and used as covariates in the multivariate analyses. These covariates covered demographics, job characteristics and personality. The sample were recruited from the staff of a local county council in South Wales and included both white-collar and blue-collar workers. Wadsworth et al. (2004) carried out a survey of a community-based population sample (N > 7000) in South Wales and found that smoking was associated with anxiety, depression, being female, lower educational qualifications and income, being aged over 25 years and being unemployed. Heavy alcohol consumption was associated with being depressed, experiencing sleeping problems, risk-taking, being male, higher income, not being married, and being under 25 years old. These variables and those related to wellbeing were examined in the present research in a sample from the same geographical region as those studied by Wadsworth et al. (2004).

2. Method

This study involved a postal survey of the well-being and health and safety of public sector workers. It was carried out with the approval of the ethics committee, School of Psychology, Cardiff University, and the informed consent of the volunteers.

2.1 Participants

The participants were 1392 public sector employees from South Wales, UK (74.3% female; mean age: 43.3 years, range 17-72 years). 15.5% were single, 74.1% married/cohabiting, 2.3% separated, 6.0% divorced and 2.1% widowed. 25.7% were educated to degree level. 76.1% were full-time staff and 23.9% part-time. 13.6% earned < £10K, 37% £10-20K, 27.9% £20-30K and 21.4% > £30K per annum.

2.2 Smoking and Alcohol Consumption

39.3% of the sample were smokers (mean number of cigarettes a day = 11.28, range 1-40). The average weekly alcohol consumption was 9.2 units with a range of 0-100. 32.3 % consumed more than the recommended safe level (> 14 units), and 18.4% were non-consumers.

2.2 Measures

The survey consisted of sections measuring demographics and personality (Wadsworth et al., 2004), job characteristics (the HSE Management Standards - Mackay et al., 2004), job satisfaction (Warr, Cook & Wall, 1979), occupational stress (Smith et al., 2000), accidents, injuries and cognitive failures (Wadsworth et al., 2003), illness in the last year and symptoms in the last 14 days (Smith et al., 2000), risk-taking (Smith, 2016), fatigue (Ray et al., 1992), anxiety and depression (Zigmond & Snaith, 1983). Smoking and units of alcohol consumption per week were also recorded (Smith et al., 2000). The actual questions are shown in the Appendix.

2.3 Statistical analysis

Multivariate ANOVA (MANOVA) analyses examined the associations between smoking, alcohol consumption and the wellbeing and health and safety outcomes while controlling for the established predictors (demographics, personality, and job characteristics). Smoking was entered as a categorical variable. Alcohol consumption was coded as three groups: non-consumers, consumers below the recommended threshold (14 units a week) and those consuming more than the recommended limit.

3. Results

Smoking:

The MANOVA revealed a significant overall effect of smoking status (Wilks' Lambda = 4.39, $p < 0.00$, partial eta squared = 0.08). Smokers rated their job as significantly more enjoyable, reported fewer injuries outside of work but had more symptoms (mainly respiratory) in the last 14 days. These effects are shown in Table 1.

Table 1: Significant effects of smoking status (scores are the means (sds); higher scores = greater job enjoyment, more symptoms in last 14 days and more minor injuries).

	Smokers	Non-Smokers	p value
Job enjoyment	4.00 (1.04)	3.69 (1.07)	$p < 0.001$
Total symptoms	5.19 (3.95)	3.64 (3.25)	$p< 0.001$
Minor injuries	1.86 (0.92)	2.12 (0.98)	$p < 0.005$

The interactions between smoking and level of alcohol consumption were not significant. However, alcohol consumption status had a significant overall effect (Wilks' Lambda = 1.97, $p < 0.001$, partial eta squared = 0.04) and was significantly associated with a number of specific outcomes. Two different profiles of effect were observed. These are shown in Table 2. First, there was a linear dose-response relationship between alcohol consumption and risk-taking and cognitive failures. Secondly, those consuming alcohol at a safe level had the lowest scores for physical symptoms, fatigue and depression. Non-consumers had lower scores for these outcomes than those consuming above the recommended safe level. Finally, in terms of job satisfaction, those consuming alcohol below the safe limit had the highest job satisfaction, followed by the non-consumers, and those consuming above the recommended limit had the lowest job satisfaction.

Table 2: Significant effects of alcohol groups (scores are the means (sds); higher scores = greater job satisfaction, more frequent cognitive failures, more risk-taking, more symptoms in last 14 days, higher depression and fatigue scores).

	Non-consumers	Below 14 units a week	Above 14 units a week	p value
Job satisfaction	134.00 (25.3)	135.86 (23.40)	124.86 (24.05)	$p < 0.001$
Cognitive Failures	2.61 (1.07)	2.67 (0.97)	2.97 (1.00)	$p < 0.01$
Risk taking	1.80 (0.87)	2.05 (0.87)	2.34 (0.87)	$p < 0.005$
Total symptoms	4.45 (3.66)	4.09 (3.58)	4.94 (3.62)	$p < 0.05$
Fatigue	32.78 (15.96)	32.53 (16.51)	36.86 (15.69	$p < 0.001$
Depression	4.72 (3.77)	4.68 (3.62)	6.09 (4.32)	$p < 0.001$

4. Discussion

The results showed that after adjusting for correlated attributes of smoking and alcohol consumption, and the established predictors of the health, safety and wellbeing outcomes, relatively few effects of smoking and alcohol were significant. Furthermore, there were no significant interactions between alcohol consumption patterns and smoking. Smoking was associated with more acute physical symptoms which reflects effects on the respiratory tract. Two positive effects of smoking were observed. The first was that smokers reported more job enjoyment. This may reflect the social aspect of smoking at work, where groups of smokers may have greater social interaction

while having a cigarette. Finally, smoking was associated with fewer minor injuries, which could be due to a beneficial effect of smoking on attention (see Wesnes & Parrott, 1992).

Alcohol consumption was associated with more significant effects and two distinct profiles of effects were observed. The first, seen in the safety and performance efficiency measures (risk-taking and cognitive failures) showed a dose-response, with more alcohol being associated with more negative outcomes. Job satisfaction and physical and mental health measures showed a different profile, with high alcohol consumption revealing the most negative effects but moderate consumption, below the recommended threshold, was associated with better health and wellbeing than the non-consumer groups. This J-shaped curve has been reported before and it has been speculated that the benefits of moderate alcohol consumption reflect anti-inflammatory effects (Cohen et al., 1993).

A limitation of the current research was that it was cross-sectional which makes attribution of causality difficult. Further longitudinal studies, preferably with appropriate interventions, are now required. Another limitation was that the present study does not inform on the underlying mechanisms linking smoking and alcohol consumption with various outcomes. Future research should use a multi-variate longitudinal approach to help identify underlying mechanisms and assess the benefits of education about alcohol consumption and smoking cessation. Smoking and alcohol consumption are often associated with the use and misuse of other substances (e.g. recreational drugs – Wadsworth et al., 2004). Future research should adjust for drug use and also look at the combined effects of co-usage of tobacco, alcohol and illegal drugs.

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Appendix

STRICTLY CONFIDENTIAL

Well-Being Survey

The Centre for Occupational & Health Psychology, Cardiff University.
63 Park Place, Cardiff. CF10 3AS.

YOU AND YOUR JOB

We would like to ask you some questions about you and work.

1.1 What is your job title? _____

1.2 What grade are you currently working at?

_____

1.3 Is the job full-time or part-time? (Full-time: 30 hours per week or more, Part time: up to 30 hours per week). Please tick ONE box.

Full-time ☐1

Part-time ☐2

1.4 Is your job permanent, temporary/casual, or fixed contract? Please tick ONE box.

Permanent ☐1
Temporary/casual ☐2
Fixed contract ☐3

1.5 Which one of the following best describes your current position at work? Please tick one box.

Manager (25+ employees*) ☐1
Manager (less than 25 employees*) ☐2
Supervisor ☐3
Employee ☐4

(* Total number in Company, not just those of whom you are in charge).

1.6 In this job, how many hours per week do you work on average? _____

1.7 What is your work pattern?

Fixed hours ☐1
Flexi-time ☐2
Shift work ☐3

SHIFTWORKERS ONLY

1.8 What is the length of your current shift?

6hrs ☐1
8hrs ☐2
12hrs ☐3

1.9 Thinking about the past year, have you suffered from any illness that you think was caused, or made worse by work?

Yes ☐1 No ☐2

If yes, please specify:

_____

1.10 In general, how stressful do you find your job?

Not at all stressful	Mildly stressful	Moderately stressful	Very stressful	Extremely stressful
☐1	☐2	☐3	☐4	☐5

1.11 In general, how much do you enjoy your job?

Really don't enjoy my job				Really do enjoy my job
☐1	☐2	☐3	☐4	☐5

1.12 Have you been subjected to bullying in the workplace in the last 12 months?

No	Seldom	Now and then	About once a week	More than once a week
☐1	☐2	☐3	☐4	☐5

1.13 INSTRUCTIONS: The questions in this scale ask you about your feelings and thoughts at work during the last month. In each case, please indicate by circling a number how often you felt or thought a certain way.

a. In the last month, how often have you been upset because of something that happened unexpectedly?

1 = never 2 = almost never 3 = sometimes 4 = fairly often 5 = very often

b. In the last month, how often have you felt that you were unable to control the important things in your life?

1 = never 2 = almost never 3 = sometimes 4 = fairly often 5 = very often

c. In the last month, how often have you felt nervous and 'stressed'?

1 = never 2 = almost never 3 = sometimes 4 = fairly often 5 = very often

d. In the last month, how often have you dealt successfully with day to day problems and annoyances?

1 = never 2 = almost never 3 = sometimes 4 = fairly often 5 = very often

e. In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?

1 = never 2 = almost never 3 = sometimes 4 = fairly often 5 = very often

f. In the last month, how often have you felt confident about your ability to handle your personal problems?

1 = never 2 = almost never 3 = sometimes 4 = fairly often 5 = very often

g. In the last month, how often have you felt that things were going your way?

1 = never 2 = almost never 3 = sometimes 4 = fairly often 5 = very often

h. In the last month, how often have you felt that you could not cope with all the things that you had to do?

1 = never 2 = almost never 3 = sometimes 4 = fairly often 5 = very often

i. In the last month, how often have you been able to control irritations in your life?

1 = never 2 = almost never 3 = sometimes 4 = fairly often 5 = very often

j. In the last month, how often have you felt that you were on top of things?

1 = never 2 = almost never 3 = sometimes 4 = fairly often 5 = very often

k. In the last month, how often have you been angered because of things that were outside your control?

1 = never 2 = almost never 3 = sometimes 4 = fairly often 5 = very often

l. In the last month, how often have you found yourself thinking about things that you have to accomplish?

1 = never 2 = almost never 3 = sometimes 4 = fairly often 5 = very often

m. In the last month, how often have you been able to control the way you spend your time?

1 = never 2 = almost never 3 = sometimes 4 = fairly often 5 = very often

n. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

1 = never 2 = almost never 3 = sometimes 4 = fairly often 5 = very often

1.14 How tired would you say you felt <u>when you got up this morning?</u>
(place a cross on the line which best corresponds to how you felt <u>first thing this morning</u>) e.g.

Not at all tired --------X---------- Extremely tired

Not at all tired ---------- Extremely tired

1.15 It is recognised that working conditions affect worker well-being. Your responses to the questions below will help to determine your working conditions now. It is important that your responses reflect your work in the last six months.

	Never	Seldom	Sometimes	Often	Always
I am clear what is expected of me at work	□ 1	□ 2	□ 3	□ 4	□ 5
I can decide when to take a break	□ 1	□ 2	□ 3	□ 4	□ 5
Different groups at work demand things from me that are hard to combine	□ 1	□ 2	□ 3	□ 4	□ 5
I know how to go about getting my job done	□ 1	□ 2	□ 3	□ 4	□ 5
I am subject to personal harassment in the form of unkind words or behaviour	□ 1	□ 2	□ 3	□ 4	□ 5
I have unachievable deadlines	□ 1	□ 2	□ 3	□ 4	□ 5
If work gets difficult, my colleagues will help me	□ 1	□ 2	□ 3	□ 4	□ 5
I am given supportive feedback on the work I do	□ 1	□ 2	□ 3	□ 4	□ 5
I have to work very intensively	□ 1	□ 2	□ 3	□ 4	□ 5
I have a say in my own work speed	□ 1	□ 2	□ 3	□ 4	□ 5
I am clear what my duties and responsibilities are	□ 1	□ 2	□ 3	□ 4	□ 5
I have to neglect some tasks because I have too much to do	□ 1	□ 2	□ 3	□ 4	□ 5
I am clear about the goals and objectives for my department	□ 1	□ 2	□ 3	□ 4	□ 5
There is friction or anger between colleagues	□ 1	□ 2	□ 3	□ 4	□ 5
I have a choice in deciding how I do my work	□ 1	□ 2	□ 3	□ 4	□ 5
I am unable to take sufficient breaks	□ 1	□ 2	□ 3	□ 4	□ 5
I understand how my work fits into the overall aim of the organisation	□ 1	□ 2	□ 3	□ 4	□ 5
I am pressured to work long hours	□ 1	□ 2	□ 3	□ 4	□ 5
I have a choice in deciding what I do at work	□ 1	□ 2	□ 3	□ 4	□ 5
I have to work very fast	□ 1	□ 2	□ 3	□ 4	□ 5
I am subject to bullying at work	□ 1	□ 2	□ 3	□ 4	□ 5
I have unrealistic time pressures	□ 1	□ 2	□ 3	□ 4	□ 5

I can rely on my line manager to help me out with a work problem	□ 1	□ 2	□ 3	□ 4	□ 5
	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
I get the help and support I need from colleagues	□ 1	□ 2	□ 3	□ 4	□ 5
I have some say over the way I work	□ 1	□ 2	□ 3	□ 4	□ 5
I have sufficient opportunities to question managers about change at work	□ 1	□ 2	□ 3	□ 4	□ 5
I receive the respect at work I deserve from my colleagues	□1	□ 2	□ 3	□ 4	□ 5
Staff are always consulted about change at work	□ 1	□ 2	□ 3	□ 4	□ 5
I can talk to my line manager about something that has upset or annoyed me at work	□ 1	□ 2	□ 3	□ 4	□ 5
My working time can be flexible	□ 1	□ 2	□ 3	□ 4	□ 5
My colleagues are willing to listen to my work-related problems	□ 1	□ 2	□ 3	□ 4	□ 5
When changes are made at work, I am clear how they will work out in practice	□ 1	□ 2	□ 3	□ 4	□ 5
I am supported through emotionally demanding work	□ 1	□ 2	□ 3	□ 4	□ 5
Relationships at work are strained	□ 1	□ 2	□ 3	□ 4	□ 5
My line manager encourages me at work	□ 1	□ 2	□ 3	□ 4	□ 5

1.16 Please read each item and then tick the box next to the reply that comes closest to how you have been feeling in the past week. Try to give your first reaction. This will probably be more accurate than spending a long time thinking about an answer. Please answer all questions, and tick only ONE BOX per question.

a) I feel tense or wound up
- Most of the time ☐1
- A lot of the time ☐2
- From time to time, occasionally ☐3
- Not at all ☐4

b) I feel as if I am slowed down
- Nearly all the time ☐1
- Very often ☐2
- Sometimes ☐3
- Not at all ☐4

c) I still enjoy the things I used to enjoy
- Definitely as much ☐1
- Not quite so much ☐2
- Only a little ☐3
- Hardly at all ☐4

d) I get a sort of frightened feeling like "butterflies" in the stomach
- Not at all ☐1
- Occasionally ☐2
- Quite often ☐3
- Very often ☐4

e) I get a sort of frightened feeling as if something awful is about to happen
- Very definitely and quite badly ☐1
- Yes, but not too badly ☐2
- A little, but it doesn't worry me ☐3
- Not at all ☐4

f) I have lost interest in my appearance
- Definitely ☐1
- I don't take as much care as I should ☐2
- I may not take quite as much care ☐3
- I take just as much care as ever ☐4

g) I can laugh and see the funny side of things
- As much as I always could ☐1
- Not quite so much now ☐2
- Definitely not so much now ☐3
- Not at all ☐4

h) I feel restless as if I have to be on the move
- Very much indeed ☐1
- Quite a lot ☐2
- Not very much ☐3
- Not at all ☐4

i) Worrying thoughts go through my head
- A great deal of the time ☐1
- A lot of the time ☐2
- From time to time but not too often ☐3
- Only occasionally ☐4

j) I look forward with enjoyment to things
- As much as I ever did ☐1
- Rather less than I used to ☐2
- Definitely less than I used to ☐3
- Hardly at all ☐4

k) I feel cheerful
- Not at all ☐1
- Not often ☐2
- Sometimes ☐3
- Most of the time ☐4

l) I get sudden feelings of panic
- Very often indeed ☐1
- Quite often ☐2
- Not very often ☐3
- Not at all ☐4

m) I can sit at ease and feel relaxed
- Definitely ☐1
- Usually ☐2
- Not often ☐3
- Not at all ☐4

n) I can enjoy a good book or radio or TV programme
- Often ☐1
- Sometimes ☐2
- Not often ☐3
- Very seldom ☐4

1.17 Age: …… **yrs**

1.18 Sex: ☐1 ☐2
M **F**

1.19 Current Status: (Please tick one box only)

Single (never married)	☐1	Separated	☐4
Living with partner	☐2	Divorced	☐5
Married	☐3	Widowed	☐6

1.20 Education Completed: (Please choose all that apply)

No academic qualifications	☐1	City & Guilds / National Diploma	☐4
GCSE/ 'O' Level	☐2	BA / BSc	☐5
AS Level/SCE Higher/Matriculation	☐3	Higher degree / Professional qualification	☐6

1.21 How would you describe yourself?

White	☐1	Black Caribbean	☐2
Black African	☐3	Black neither Caribbean or African	☐4
Indian	☐5	Pakistani	☐6
Bangladeshi	☐7	Chinese	☐8
		None of these (Please specify)	☐9

_____

1.22 What is the total current yearly amount you receive from your wage, pension, benefit allowance or annual salary (before tax is deducted)? Please indicate one category.

less than £2,500	☐1	£2,500-£4,999	☐2	£5,000-£9,999	☐3
£10,000-£15,999	☐4	£16,000-£19,999	☐5	£20,000-£24,999	☐6
£25,000-£29,999	☐7	£30,000-39,999	☐8	£40,000-49,999	☐9
£50,000 or more	☐10				

2.1 Now we would like to ask you about where you worked in the last 2 months. For each question please tick ONE answer that best describes your work.

		Often	Some-times	Seldom	Never/ almost never
a)	Did you work at night?	☐1	☐2	☐3	☐4
b)	Did you do shift work?	☐1	☐2	☐3	☐4
c)	Did you have to work long or unsociable hours?	☐1	☐2	☐3	☐4
d)	Did you have to be “on call” for work?	☐1	☐2	☐3	☐4
e)	Did you have unpredictable working hours?	☐1	☐2	☐3	☐4
f)	Did your job ever expose you to breathing fumes, dusts or other potentially harmful substances?	☐1	☐2	☐3	☐4
g)	Did your job ever require you to handle or touch potentially harmful substances or materials?	☐1	☐2	☐3	☐4
h)	Did you ever have work tasks that leave you with a ringing in your ears or a temporary feeling of deafness?	☐1	☐2	☐3	☐4
i)	Did you work in an environment where the level of background noise disturbs your concentration?	☐1	☐2	☐3	☐4

HEALTH AND WELL-BEING

3.1 Have you ever been told by the doctor that you have, or have had any of the following? Please tick Yes or No for EACH of the categories in the following list.

	Yes	No
Angina	☐1	☐
High cholesterol level	☐2	☐
Diabetes	☐3	☐
Stroke	☐4	☐
Heart attack (coronary thrombosis, myocardial infarction)	☐5	☐
High blood pressure	☐6	☐
Nervous trouble or depression	☐7	☐
Asthma	☐8	☐
Emphysema	☐9	☐
Bronchitis	☐10	☐
Breast cancer	☐11	☐
Other cancer	☐12	☐
Other _____	☐13	☐

3.2 In the last 12 months have you suffered from any of the following health problems?

Please tick Yes or No for EACH of the categories in the following list.

	Yes	No
Bronchitis	☐1	☐
Arthritis or rheumatism	☐2	☐
Sciatica, lumbago or recurring backache	☐3	☐
Persistent skin trouble (e.g. eczema)	☐4	☐
Asthma	☐5	☐
Hay fever	☐6	☐
Recurring stomach trouble or indigestion	☐7	☐
Being constipated all or most of the time	☐8	☐
Piles	☐9	☐
Persistent foot trouble (e.g. bunions, in-growing toenails)	☐10	☐
Trouble with varicose veins	☐11	☐
Nervous trouble or persistent depression	☐12	☐
Persistent trouble with your gums or mouth	☐13	☐
Problems sleeping	☐14	☐
Other_____		

3.3 Have you had any of the following symptoms in the last 14 days?

	Yes	No
A cough, catarrh or phlegm	□1	□
Diarrhoea	□2	□
Heartburn, wind or indigestion	□3	□
Shortness of breath	□4	□
Dizziness or giddiness	□5	□
Earache or discomfort in the ears	□6	□
Swollen ankles	□7	□
Nervy, tense or depressed	□8	□
A cold or flu	□9	□
A sore throat	□10	□
Difficulty sleeping	□11	□
Pains in the chest	□12	□
Backache or pains in the back	□13	□
Nausea or vomiting	□14	□
Feeling tired for no apparent reason	□15	□
Rashes, itches or other skin trouble	□16	□
Blocked or runny nose	□17	□
Headache	□18	□
Wheeziness	□19	□
Toothache or trouble with gums	□20	□
Other _____	□21	□

3.4 In the last year have you taken any of the following medicines prescribed by a doctor?

Pain killers	**Yes** □1	**No**□
Sleeping pills	**Yes** □2	**No**□
Anti-depressants	**Yes** □3	**No**□
Medicines for stress or anxiety	**Yes** □4	**No**□

3.5 Over the past 12 months, how would you say your health in general has been?

Very good	Good	Fair	Bad	Very bad
□1	□2	□3	□4	□5

3.6 How do you find life in general?

Not at all stressful	Mildly stressful	Moderately stressful	Very stressful	Extremely stressful
□1	□2	□3	□4	□5

ACCIDENTS AND INJURIES

4.1 Thinking about the last 12 months, have you had any accidents WHILE YOU WERE WORKING that required medical attention from someone else (e.g. a first aider, GP, nurse or hospital doctor)?

None	1	2 or more
☐1	☐2	☐3

4.2 How many accidents requiring medical attention have you had OUTSIDE work in the last 12 months?

None	1	2 or more
☐1	☐2	☐3

4.3 In the last 12 months how frequently have you had minor injuries that did not require medical attention?

a) at work

Not at all	Rarely	Occasionally	Quite frequently	Very frequently
☐1	☐2	☐3	☐4	☐5

b) outside of work

Not at all	Rarely	Occasionally	Quite frequently	Very frequently
☐1	☐2	☐3	☐4	☐5

4.4 How frequently do you find that you have problems of memory (e.g. forgetting where you put things), attention (e.g. failures of concentration), or action (e.g. doing the wrong thing)?

a) at work

Not at all	Rarely	Occasionally	Quite frequently	Very frequently
☐1	☐2	☐3	☐4	☐5

b) outside of work

Not at all	Rarely	Occasionally	Quite frequently	Very frequently
☐1	☐2	☐3	☐4	☐5

4.5 How frequently do you take risks?

a) at work

Not at all	Rarely	Occasionally	Quite frequently	Very frequently
☐1	☐2	☐3	☐4	☐5

a) outside work
b)

Not at all	Rarely	Occasionally	Quite frequently	Very frequently
☐1	☐2	☐3	☐4	☐5

LIFESTYLE

In this section, we are interested in finding out about how you live your life. In particular, we are interested in how much (or little) you drink or smoke.

5.1 Do you smoke cigarettes now (i.e. NOT cigars/pipe)?

Yes ☐1 No ☐2

5.2 How many cigarettes do you smoke per day?

Manufactured Handrolled

_____ _____

5.3 On average how often do you drink during the week, that is weekdays. Please tick ONE BOX only.

Never	1 - 2 Days	3 Days	4 Days
☐1	☐2	☐3	☐4

5.4 How many units do you drink during an average week? _____ units

(1 unit = half a pint of beer/1 small glass of wine/1 pub measure of spirits)

5.5 On average how often do you drink at the weekends. Please tick ONE BOX only.

Never	1 - 2 Days	All 3 Days
☐1	☐2	☐3

5.6 How many units do you drink on an average weekend? _____ units

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To Evaluate Cerebral Infarction Among Hypertensive Patients on Magnetic Resonance Imaging

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Abstract
Background: cerebral infarction among Hypertensive patients is very common that increases the complications of mortality in later age. This study aimed to rule out cerebral infarction among hypertensive patients on Magnetic resonance imaging. Objective: To Evaluate cerebral infarction among hypertensive patients on MRI. Methods: The study will be conducted in 162 hypertensive patients including both Male and female. To assess Cerebral infarction it will be acquired on MRI Results: we separated the subjects on the basis of their age (40-91 years). We grouped the same subjects on the basis of their sex (77 males, 47.5% & 85 females, 52.5%) calculating their frequency and percentage respectively. The mean values among the age of patients and the standard deviation in subjects is 67.35±10.937. The Frequency and percentage of patients complaining showed that vertigo (11.7%), Diabetes Mellitus (45.1 %), Dementia (4.3%) appeared with Cerebral Infarction. We Produced a table where we separated infarction on the basis of NO infarction (53.7%) Numbers of infarction One (16.7%), Two (2.5%) and Multiple (27.2%) collectively (46.4%) Appeared with cerebral infarction among hypertensive patients. The results indicated that 46.4% appeared with cerebral infarction triggerd by hypertention and that hypertension can be the cause of cerebral infarction and can lead to morbidity and mortility particularly in adults. Conclusions: These results show that hypertension can be the cause of cerebral infarction and can lead to morbidity and mortility particularly in adults. This study incorporates up to the minute data regarding cerebral infarction among hypertensive patients on magnetic resonance imaging it is the modality of choice for imaging cerebral infarction. It provided a trend that needs to be validated with further studies and analysis on a bigger population

Keywords: Magnetic Imaging Resonance, Cerebral Infarction, Perfusion Weighted Imaging, Diffusion-Weighted Imaging, Hypertension

Introduction

One of the most prevalent clinical cerebrovascular illnesses, cerebral infarction accounts for 60-80% of cerebrovascular illnesses. Cerebral infarction is the second major cause of death owing to its acute progression, rapid decline and severe cerebral edema complications (Liu H, 2011). Imaging is presently the most reliable strategy for cerebral infarction therapy. Diagnosis has advanced from traditional morphology to the mixture of morphology and function through the growth of contemporary medical methods and imaging technology, in particular, the advancement of MRI. Infarction can happen in the context of acute anemia, e.g., after Parvovirus

infection, risk factors include male gender, low hemoglobin, relative hypertension, hyposplenism laboratory proof, prior seizures and comparatively rare pain (Hurley MC, 2012). MRI using diffusion-weighted pictures (DWI) increases the capacity to diagnose acute cerebral infarction (CI) both in terms of absolute CI volume analysis and reliable CI location. MRI may also detect substantial occlusion or chronic stenosis of the cerebral artery.MRI enables the assessment of cerebral collateral flow and the imaging of reversible is chemical modifications (Sanak D, 2006). Diffusion-weighted (DWI) and perfusion-weighted (PWI) MRI are strong global methods for acute cerebral ischemia diagnosis (Tong D, 1998). Imaging with Diffusion weighted MR(DWI) indicates acute ischemic damage early after stroke (Hand P, 2006). Dr. Sarah E Vermeer and her fellows Research published in July 2007 concluded that MRI-defined silent brain infarcts among 20% of healthy elderly people and up to 50% of patients in selected series. Most infarcts are lacunes, of which hypertensive small-vessel disease is thought to be the main cause (Vermeer SE, 2007). According to D Renard in the reviewed article on Cerebral microblems: a magnetic resonance imaging review of common and less common causes published in Dec 9, 2017 concluded that Cerebral microblems (CMBs) are tiny foci of (acute, subacute or chronic) blood products, easiest seen outside iron deposit-sensitive magnetic resonance imaging (MRI) techniques (i.e., gradient-echo T2 * -weighted and prone). Often found in small vessel disease (SVD) (the most common conditions are hypertensive vasculopathy and cerebral amyloid angiopathy) and other illnesses as well (Renard D, 2018). According to C kesavadas and his fellows reserach published on 2003 in a study concluded that Diffusion imaging has an elevated degree of sensitivity and specificity for acute brain ischemia diagnosis. Along with the imaging of perfusion. DWI helps to identify the diffusion territory-perfusion mismatch representing the penumbra of the operational ischemic. DWI pictures help to distinguish acute from subacute and chronic ischemic insults together with apparent diffusion coefficient (ADC) maps. If early thrombolysis is instituted, the hyperintense region in DWI seen in acute brain ischemia can be inverted. DWI shows ischaemic abnormality. The latest MR methods have been created to reduce artifacts related to diffusion imaging (Kesavadas , 2003). According to R rajeshkannan and hisss fellow members reserach published in 2006 concluded that Diffusion MR scanning has now become a regular element of brain MR imaging testing and is important in assessing patients with stroke. Furthermore, elevated signal intensity on MR diffusion and hypointensity on obvious co-efficient diffusion (ADC) pictures, characteristics of acute cerebral infarction, were revealed under such varied circumstances as hemorrhage, abscess and tumor (RajeshKannan R, 2006). According to S Bhagvati research published in 2013 in a study concluded that Multiple, concurrent, acute cerebral infarcts are generally secondary to embolic occlusion of various cerebral arteries in distinct arterial regions. A five-year retrospective review of all patients with numerous, near-simultaneous, acute cerebral infarction identified on diffusion-weighted MRI scans. Our research indicates that transient blood pressure decrease in high-risk hypertensive patients with serious, tiny vessel illness may sometimes lead to tiny, cerebral infarction (Bhagvati S, 2013). According to sathoshi Hoshide kazuomi kario research published in 2001 in a study concluded that Lacunar mechanisms differ extensively, hypertensive small-vessel vasculopathy is regarded as the most prevalent cause of lacunar infarction (Hoshide S, 2001).

According to Fernando, research published in 2003 in a study indicated that (MRI) is an effective perfusion assessment method and plays a growing role in acute stroke inquiry (Calamante F, 2003).

Methods

It was a Descriptive study carried out in department of Radiology, Al-Razi health care center Lahore. The expected duration of study is from May 2019 to July 2019.The study was conducted on population with a sample size of 162. Both Male and female subjects were enrolled for examination on MRI Siemens 1.5T Magnetom The approach used is the subject lying in the supine position. To assess Cerebral infarction, head scan were acquired by MRI. Hypertension was diagnosed to patients in the sitting position if patient blood pressure reached 160 mm Hg systolic/95 mm Hg diastolic, The collected data was stored in EXCEL, predesigned data collection sheets and SPSS software were used to apply relevant tests for statistical analysis. As the research follows scientific method, related information was taken from the recent articles and the references were given in the chapter of references.

Results

We calculated the mean values and the standard deviations of the data acquired. The mean values among the age of patients and the standard deviation in subjects is 67.35±10.937. The Frequency and percentage of patients complaining showed that vertigo (11.7%), Diabetes Mellitus (45.1 %), Dementia (4.3%) appeard with Cerebral Infarction. We Produced a table where we separated infarction on the basis of NO infarction (53.7%) Numbers of infarction One (16.7%), Two (2.5%) and Multiple (27.2%) collectively (46.4%) Appeared with cerebral infarction among hypertensive patients. The results indicated that 46.4% appeared with cerebral infarction triggerd by hypertention and that hypertension can be the cause of cerebral infarction and can lead to morbidity and mortility particularly in adults**.**

Table 1: Mean Among Age Of Patients

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Age	162	40	91	67.35	10.937
Valid N (listwise)	162				

The table shows the mean values of the parameters and the standard deviation. The mean recorded in total sample size was 67.35; the descriptive statistics had a minimum of 40 and a maximum 91 age of patients. The calculated hypertensive patients age estimated among Patients was as low as 40 and as high as 91. The mean values among the age of patients and standard deviation in subjects is 67.35±10.937.

Table 2. Frequency table of Hypertensive Patients

Gender	Frequency	Percentage %
Male	77	47.5%
Female	85	52.5%

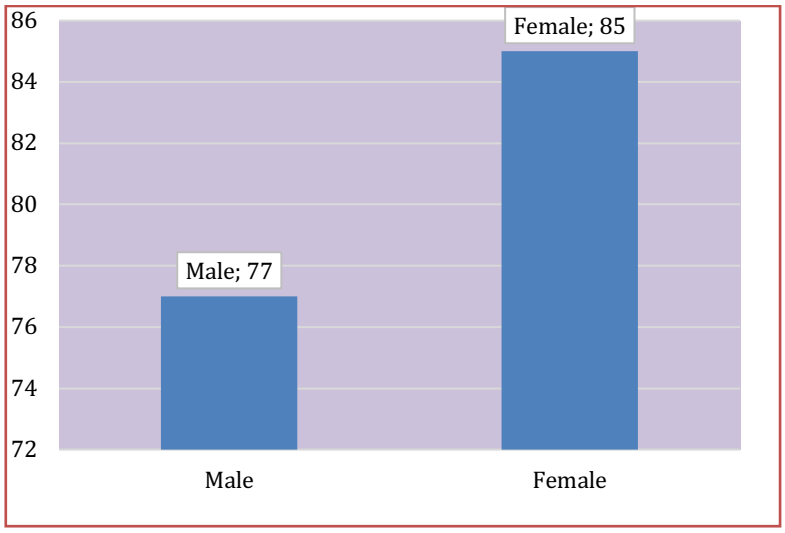


Table 2: Table represents the frequency of Hypertensive males and females. The percentage of hypertensive females (85) in our study was 52.5 .while percentages of Males were 47.5, respectively.

Table 3: Frequency table of diabetes Mellitus Among Hypertensive patients

DIABETES MELLITUS

DM	Frequency	Percentage %
Yes	73	45.1%
No	89	54.9%

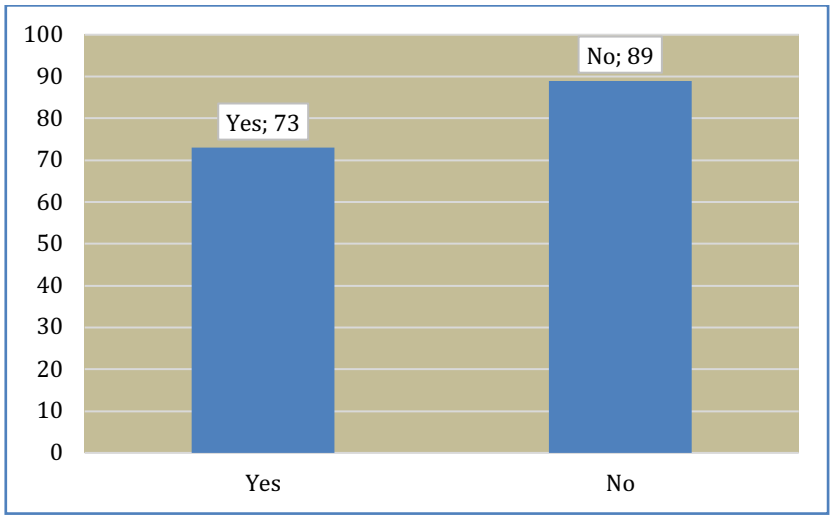


Table 3: Table shows 73 hypertensive Patients with 45.1% Having Diabetes Mellitus while 89 hypertensive patients 54.9% were non-diabetic.

The data showed that (46.4%) Appeared with cerebral infarction among hypertensive patients. And 53.7% of hypertensive patients appeared with no any form of cerebral infarction. Among the sample size the frequency of Dementia was very low 4.3% most of the hypertensive patients were without dementia 95.7%.

Table 4 : Frequency table of Vertigo among hypertensive Patients

Vertigo	Frequency	Percentage %
Yes	19	11.7%
No	143	88.3%

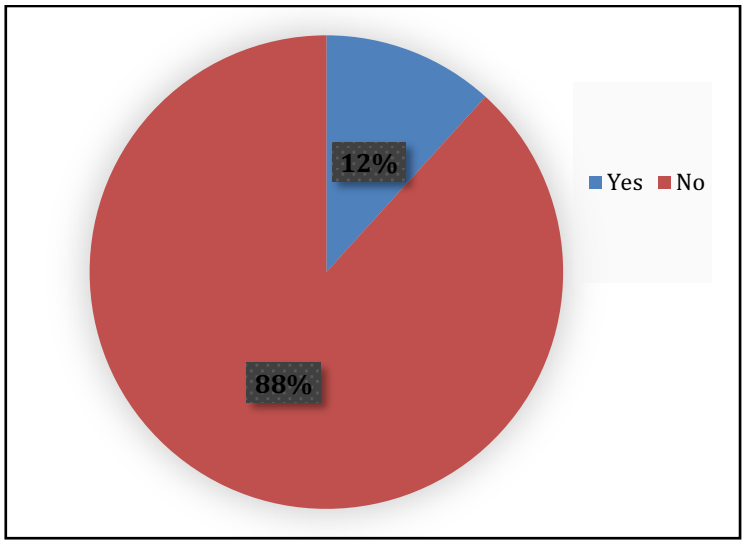
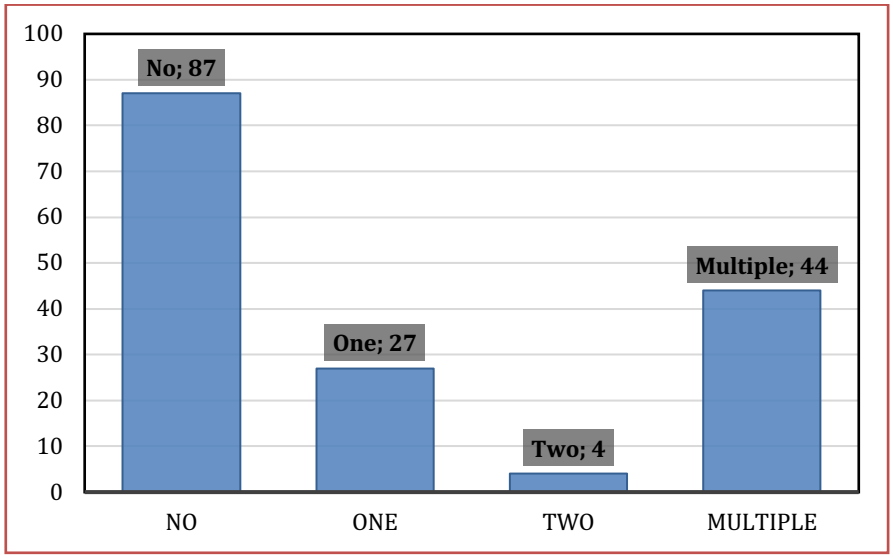


Table 4: Table shows 19 Hypertensive Patients with 11.7% showing vertigo while 143 hypertensive patients with 88.3% show no sign of vertigo.

A pie chart was also made to demonstrate the Frequency and percentage of patients with Presenting Complains showed that vertigo (11.7%), Diabetes Mellitus (45.1 %), Dementia (4.3%) appeared with Cerebral Infarction. We Produced a table where we separated infarction on the basis of NO infarction (53.7%) Numbers of infacrtion One (16.7%), Two (2.5%) and Multiple (27.2%) collectively (46.4%) Appeared with cerebral infarction among hypertensive patients.

Table 5: Number Of Infarctions

Number of Infarctions	Frequency	Percentage %
No	87	53.7%
One	27	16.7%
Two	4	2.5%
Multiple	44	27.2%



We separated infarction on the basis of NO infarction (53.7%) Numbers of infacrtion One (16.7%), Two (2.5%) and Multiple (27.2%) collectively (46.4%) Appeared with cerebral infarction among hypertensive patients.

At first we produced a table where we separated the subjects on the basis of their age criteria (Table 1), (40-91 years) Then in the second table we grouped the same subjects on the basis of their sex (77 males, 47.5% & 85 females, 52.5%) calculating their frequency and percentage (Table 2), We calculated their standard deviations and mean values. The data Collected was tabulated in tables, as the purpose of this study is to rule out cerebral infarction in hypertensive patients as it is one of the major cause of mortality among the hypertensive patients.

Discussion

It was a Descriptive study on the topic of cerebral infarction among hypertensive patients on MRI. It was performed on the Lahore population in 2019. The main purpose of this research is to rule out cerebral infarction in hypertensive patients as it is one of the major cause of mortality among the hypertensive patients and Magnetic Resonance Imaging does provide sufficient information regarding cerebral infarction earlier studies used computed tomography for the evaluation of cerebral infarction. At that time, the results acquired by CT & MRI were nearly equivalent, but if we are talking about modern-day technology then MRI has surpassed in advancement and has become the modality of choice for imaging cerebral infarction. This research report aims

to acquire data about cerebral infarction among hypertensive patients on MRI. We aim to define a somewhat proper relationship between cerebral infarction and hypertensive patients using magnetic resonance imaging. Despite its significance Majority of the work done on cerebral infarction is by CT, although MRIs are more detailed in their images We examined 77 males and 85 females in the radiology department of AL-Razi Health Care Center Lahore. Population entered for MRI Head Scan examination were minimum 40 years and maximum 91 years old with the mean of 67.35

According to Ali Guerrmazi research published in 2003 Rapid and precise evaluation is crucial but often hard as neurological manifestations are usually disease-specific. Presenting the imagery characteristic of the central nervous system Neurological imaging in conjunction with electrophysiological research as well as blood and cerebrospinal fluid investigations may be useful to diagnose Many of these complications and the differentiation between the underlying disease manifestations (Guermazi A, 2003)

According to DA Decker research published in 2018 in a study concluded That cerebrovascular diseases, including ischemical and hemorrhagic circumstances, are the world's leading causes of death and disability. Because ischemic types of cerebrovascular disease with atherothrombosis are the most prevalent cause of stroke syndromes, cerebral infarction patterns are assessed. Hypertensive vascular disease contributes to the growth of atherosclerosis and arteriolosclerosis and is the leading cause of acute cerebral hemorrhage and lacunar infarction, both caused by profound penetration artery harm (Decker DA, 2018).

Another study investigated in 2017. It is a medical emergency with potentially devastating disease risk on an acute intracerebral hemorrhage. ICH is the second leading form of stroke after an ischemic stroke. Bleeding may result from multiple etiologies within the brain parenchyma. Though there are also other risk factors, hypertension is by far, the major risk factor for ICH (Alerhand Stephen, 2017).

Another of the study was conducted on the topic of Hypertension as a Risk Factor for sponataneous Intracerbral hemorrhage The study showed that To assess relative risk, the cases are correlated with samples with and without hypertension derived from the blood pressure analysis (n = 16,204). The relative risk of intracerebral hemorrhage was 3.9 (95 % maximum likelihood, 2.7 to 5.7) for the presence of prior hypertension. The relative risk was 5.4 (3.7 to 7.9) for the comprehensive definition of hypertension. Relative risk for black hypertension(= 4.4), age beyond 70 (= 7), previous cerebral infarction (= 22) and diabetes (= 3) was also established. We conclude that, particularly in whites, the word "hypertensive hemorrhage" should be used very selectively. and propose that hyperten And say that hypertension should be considered one of several primary risk factors for spontaneous intracerebral hemorrhage. (Brott TH ,1986)

Another study was performed on the topic of cerebral infarction in Young Adults Results showed Of the 428 first strokes, 212 (49.5%) had at least one reasonable cause, 80 (18.7%) had no reasonable grounds but at least one possible cause, and 136 (31.8%) had no probable or possible cause established Of the 212 that have a minimum of a likely cause, coronary embolism (31.1%), atherosclerotic and other (19.8%), oral contraceptive use (5.2%), large artery atherosclerotic disorder (3.8%), and migraine (1.4%) were reported. Small vessel disease (19.8%), nonatherosclerotic vasculopathy (11.3%), illegal drug use (9.4%), They also found that the most common cerebral infarction etiologies among young adults were in this hospital-based database within an area marked by racial/ethnic diversity, cardiac infarction, atherosclerotic and other causes, and lacunar strokes. Up to one-third of both the first and persistent strokes had no cause reported. (S.J.Kittner, 1998).

A study performed in 1994 their objective was To evaluate hypertensive cerebral involvement before cerebrovascular accidents. Our selection criteria were observed in 58 patients with hypertension, 11 patients with borderline hypertension, 15 hypertensive patients with cerebral infarction, and 58 normotensive controls. Researchers found that in both the symptomatic and asymptomatic hemispheres of the hypertensive patients, including cerebral infarction, the borderline hypertensive patients are greater than that. Two risk factors for cerebral atherosclerosis (age and hypertension) have been negatively correlated with cerebrovascular CO2 reactivity in subjects without cerebral infarction. Concluded that hypertension impaired the microvascular

permeability of the brain before cerebrovascular injuries occurred and its influence depended on the degree to which other target organs were involved (Maeda H,1994).

Another study performed in osaka university Hospital 2017 study data showed that MRI analysis of the brain examined 108 consecutive outpatients without a record of stroke. These included 66 patients with critical hypertension (63±9 years of age; mean±SD) and 42 age-grouped normotensive subjects (61±9 years of age).Careful analysis and comprehensive neurological tests showed that no subject had neurological problems And signs and history of stroke, including transient ischemic attack. MRI studies had been performed mainly to evaluate non-specific neurological symptoms (i.e., migraine, lightheadedness, dizziness, Hypertention) Hypertension was diagnosed to patients in the sitting position if patient blood pressure reached 160 mm Hg systolic/95 mm Hg diastolic, Selected risk factors included diabetes mellitus hypercholesterolemia, daily intake of alcohol, heavy smoking of cigarettes, obesity (body mass index > 25), heart disease (arrhythmia or ischemic heart disease), hyperuricemia (serum uric acid > 7.0 mg/dl or medication) and elevated hematocrites (> 46%).In 45 of the 108 subjects analyzed (42%), SCI was observed. A total of 216 SCI lesions have been detected In hypertensive patients, the frequency of SCI appears to be higher (47%) than normotensive patients (33%). The incidence of hypertensive patients increased substantially from 27% in the 50s, 44% in the 60s and 87% in the 70s, while there was no marked increase in normotensive patients. (H Hougaku,1992)

In contrast our analyzed data showed the mean values and the standard deviations of the data acquired. The mean values among the age of patients and standard deviation in subjects is 67.35±10.937. The Frequency and percentage of patients complaining showed that vertigo (11.7%), Diabetes Mellitus (45.1 %), Dementia (4.3%) appeared with Cerebral Infarction. We Produced a table where we separated infarction on the basis of NO infarction (53.7%) Numbers of infarction One (16.7%), Two (2.5%), and Multiple (27.2%) collectively (46.4%) Appeared with cerebral infarction among hypertensive patients. The results indicated that 46.4% appeared with cerebral infarction triggered by hypertension and that hypertension can be the cause of cerebral infarction and can lead to morbidity and mortality, particularly in adults.

Conclusion

It is concluded that there was no such prominent Evaluation among hypertensive patients showing cerebral infarction. Although These results show that hypertension can be the cause of cerebral infarction and can lead to morbidity and mortality, particularly in adults. This study incorporates up to the minute data regarding cerebral infarction among hypertensive patients on magnetic resonance imaging it is the modality of choice for imaging cerebral infarction. It provided a trend that needs to be validated with further studies and analysis on a bigger population.

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Ultrasonographic Correlation of Cortical Thickness and Echogenicity Among Patients Suffering From Chronic Renal Failure

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Abstract
Background: Chronic Renal Failure (CRF) is a terminology used for heterogeneous disorders affecting the anatomy and physiology of the kidney. The variation in disease expression is related partly to cause and pathology, severity, and rate of progression Chronic Renal Failure (CRF) being recognized as a life-threatening disorder. Objective: The aim of this study was to assess the correlation of cortical thickness and echogenicity among patients suffering from chronic renal failure using ultrasound. Methodology: Cross-sectional prospective study 138 patients were included in the study. All the patients had been collected from indoor, outdoor, and emergency department of Mayo Hospital, Lahore. After informed consent, data were collected through ultrasound machine Toshiba Nimo 7. Results: Findings revealed that 138 CRF patients, 82 patients were male and 56 patients were female, and 56 patient belongs to the age group 15-35, 42 patient belongs to age group 36-55 and 40 patient belong to age group 56-75. P value is .131, which is greater than the significance level .05, which shows that there is no significant relation between both variables. Conclusion: It is concluded that there is no ultrasonographic correlation of cortical thickness and echogenicity among patient suffering from chronic renal failure

Keywords: Renal Echogenicity, Renal Cortical Thickness, Ultrasonography

Introduction

Kidneys appear as a bean-shaped structure that weighs almost 150g in men and 135g in women, and its size varies from 10-12 cm in length, 5-7 cm in width, 2-3 cm in thickness.(Wein et al., 2011) Kidneys are retroperitoneal structures that are to be found bilaterally among the transverse process of T12 to L3 while the left kidney is marginally higher in position than the right kidney. Normal renal function is of great importance as this

includes filtration and excretion process of the metabolic waste product such as urea and ammonium; regulation of electrolytes; fluid and acid-base balance; aids in production of red blood cells which is used to maintain the blood pressure through the renin-angiotensin-aldosterone system and to control water resorption; maintain the volume of blood in vessels.(Saldana et al., 2007) Chronic kidney disease is a term for heterogeneous disorders affecting the anatomy and physiology of the kidney and is based on the presence of kidney damage (i.e., albuminuria) or decreased kidney function (i.e., glomerular filtration rate) [GFR] < 60 ml/min per 1.73 m^2 for three months or more.(Levey and Coresh, 2012)There are basically two subtypes of renal disease, vascular and parenchymal. Vascular relates to a medical condition which involves the blood vessel while, on the other hand, parenchymal relates a medical condition which involves the tissue, therefore renal parenchymal disease relates to a disease affecting the kidney tissue. On ultrasound, renal parenchymal disease signifies that the kidney function is partially lost or completely.(Yun and Lee, 2007) Parenchymal kidney disease can affect either one or both of the kidneys, causing scarring and tissue damage. If the kidney is severely damaged and is unable to do filtration process, then kidney waste and surplus fluid will begin to build up, causing serious edema, and ultimately kidney failure, and the disease may be either inherited or congenital.(Clark et al., 2011)Mineral and Bone Disorder is common in chronic kidney disease (CKD) and is a major cause of morbidity owing to shorter life expectancy and skeletal calcification associated with enhanced cardiovascular mortality.(Moe et al., 2006)Polycystic renal disorders are hereditary renal disorders, primarily owing to mutations in genes that control the growth and function of cells in the renal tubules.(Wilson, 2004) Hypertension may also trigger kidney issues, or in certain cases, result from kidney disease itself if unmanaged high blood pressure may boost the potential risk of kidney disease, which may lead to the diagnosis of unnoticed serious kidney disease and parenchymal renal disease.(Hall, 2003)Obesity leads to renal vasodilation and glomerular hyper-filtration, which works as a countervailing mechanism to retain sodium equilibrium despite enhanced tubular reabsorption.(Hall et al., 2014)Diabetes mellitus (DM) is a significant leading factor causing CKD and is described as 3-month renal damage characterized as morphological or physiological defects, including or excluding reduced glomerular filtration rate (GFR) 60 mL/min/1.73 m^2 or less, including or excluding renal injury. National Kidney Foundation statistics declare that around one-third of patients with type 2 diabetes mellitus remains at a threat of acquiring CKD, and about 10% to 40% of patients with type 2 diabetes mellitus have renal impairment.(Koro et al., 2009) Kidney disease, such as infection and stone, can often be readily managed. Chronic renal inflammation is though, frequently seen in kidney disease but can slowly advance to renal failure if not correctly managed.(Barsoum, 2006)Most kidney disease can be prevented, but when kidney disease advances to renal failure; dialysis or kidney transplantation may eventually be needed.(Lutz et al., 2014)The CKD and heart disease are correlated with each other and are broadened by several epidemiological studies as CKD significantly advances with causative factors. As a result, the chance of cardiovascular disease is particularly more in people with CKD, conventional cardiovascular risk variables, impaired kidney function, and enhanced levels of serum albumin in urine, which raises the possibility of heart disease by two to four times. Yet, cardiovascular disease is frequently underdiagnosed and undertreated in patients with chronic kidney disease.(Gansevoort et al., 2013)Ultrasound imaging is a method frequently used in the detection of renal obstruction and was restricted to the assessment of anatomical and pathological alterations in the collection mechanism and for the evaluation of patients with renal disorder in Real-time and US parameters, such as renal length, cortical echogenicity. Doppler technique shows variation in renal perfusion, which is a distinct but not a specific parameter for the assessment of renal parenchymal diseases. Scarring of the cortex and size <9 cm may signify tubular atrophy, although very constrained prescriptive data is obtained on which cortical thinning is evaluated including the size, the extent to which the size is decreased and is correlated with idiopathic parenchymal disease and fewer information on the echo-texture of the cortex, which is backscattering of sound produced in the ordinary cortex by structures like glomeruli, vessels, and tubules; the collagen involved in interstitial fibrosis and glomerulo-sclerosis is liable with high echogenicity, the echogenicity is generally evaluated qualitatively by the naked eye which is very inaccurate, and we have recently revealed that renal cortex echogenicity can be reliably evaluated and normal spectrum can be established in a tiny group of adults using ultrasound.(Manley and O'Neill, 2001) Levey AS conducted research on Compared the sonographic structures of kidneys in patients with the renal inability to examine the potential part of renal US to recognize acute from chronic renal failure and evaluated the demonstrative part of superficial body zone rectified renal length contrasted with estimated renal length. No important contrasts in age, serum albumin, creatinine, body mass index, stature, or sexual orientation appropriation were originated amongst patients with ARF and those with CRF, excluding from in serum hemoglobin. The bilateral parenchymal thickness and renal size were

important in ARF patients than in those with CRF ($p < 0.0001$). The average parenchymal thickness and renal size were comparable in ARF patients and the controller gathering. Grade I hyperechogenicity was the most widely judgment during in sonograph (Ozmen et al., 2010).

Research undertaken by Levin A over the previous decade has seen a growing concentration on chronic kidney disease and its correlated problems, leading to a better comprehension of their effect on health care assets. Early detection of CKD has been facilitated by frequent reporting of estimated glomerular filtration levels (eGFR) and coaching of primary care physicians on the consequences of the detection of reduced eGFR in terms of patient health and safety as well as cardiovascular and renal results. Early CKD detection aims to avoid CKD development and related complications, thus enhancing patient results and decreasing the effect of CKD on medical care resources. This assessment discusses the advantages of early detection of CKD and outlines the constraints of present understanding and concerning diagnosis, early detection, and therapy, as well as the unintended consequences of evaluation. In fact, this study demonstrates what is presently known about cardiovascular and renal results and the impacts of intervention in CKD patients (Levin and Stevens, 2011).
The study is conducted to assess the ultrasonographic correlation of cortical thickness and echogenicity among patients suffering from chronic renal failure.

Methods

It was a prospective cross-sectional study. 138 patients included clinical suspicion of chronic renal failure. All the patients had been collected from indoor, outdoor, and emergency department of Mayo Hospital, Lahore. After informed consent, data were collected through ultrasound machine Toshiba Nimo 7. Renal Parenchymal changes, renal Size, and cortical Thickness were measured. While patient with no history of hypertension, diabetes, normal RFTs, and with age less than 15 years was excluded in our study. Study variable and information collected were entered into SPSS version 21.0 and analyzed through its statistical program. Ultrasound of the Kidney was done to saw the renal echogenicity and to measure the cortical thickness. Ultrasound of the Kidney was done to saw the renal echogenicity and to measure the cortical thickness. RFTs were considered as the gold standard for final diagnosis. Chi-Square test was used to correlate cortical thickness with echogenicity.

Results

This chapter deals with the analysis and interpretation of the results of the data collected from 138 Patients of Chronic Renal Failure (CRF). Table 1 shows that out of 138 CRF patient, 56 patient belong to age group 15-35, 42 patient belong to age group 36-55, and 40 patient belong to age group 56-75.

Table 1: Age of Patient (years)

Age		Frequency	Percent
Valid	15-35	56	40.6
	36-55	42	30.4
	56-75	40	29.0
	Total	138	100.0

According to Table 2, Out of 138 patients, 82 patients were male, and 56 patients were female.

Table 2: Gender of Patients (Male and Female)

Gender		Frequency	Percent
Valid	male	82	59.4
	female	56	40.6
	Total	138	100.0

Table 3 showed that cross table between renal echogenicity and renal cortical thickness explains that in grade I echogenicity, there were 20 patients in (16-19) section, 12 in (12-15), and 20 in (8-11)'s section of cortical thickness. Grade II, contain 10 patient in (16-19), 16 patients in (12-15) and 10 patients in (8-11) renal cortical thickness class. Grade III renal echogenicity 20 patients (16-19), 10 patients were in (12-15) section of cortical thickness and 20 patients were in (8-11) section of cortical thickness.

Table 3: Cross-tabulation of Renal Echogenicity and Renal Cortical Thickness.

Renal echogenicity * Renal cortical thickness Cross tabulation						
			Renal cortical thickness			**Total**
			16-19	12-15	8-11	
Renal echogenicity	**grade I**	**Count**	20	12	20	52
		Expected Count	18.8	14.3	18.8	52.0
	grade II	**Count**	10	16	10	36
		Expected Count	13.0	9.9	13.0	36.0
	grade III	**Count**	20	10	20	50
		Expected Count	18.1	13.8	18.1	50.0
Total		**Count**	50	38	50	138
		Expected Count	50.0	38.0	50.0	138.0

Testing of Hypothesis

As P-value (.131) is greater than the significant level (0.05). Therefore, the **Null hypothesis** (**H0**: There is no ultrasonographic correlation of cortical thickness and echogenicity among patients suffering from chronic renal failure was accepted, and **Alternative Hypothesis (H1:** There is an ultrasonographic correlation of cortical thickness and echogenicity among patient suffering from chronic renal failure.) was rejected.

Table 4: This Chi-Square table shows that the P value is .131, which is greater than the significance level .05, which shows that there is no significant relation between both variables.

Chi-Square Tests			
	Value	**Df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	7.099[a]	4	.131
Likelihood Ratio	6.749	4	.150
Linear-by-Linear Association	.000	1	1.000
N of Valid Cases	138		

Discussion

Out of 138 CRF patients, 82 patients were male, and 56 patients were female, and 56 patients belong to age group 15-35, 42 patients belong to age group 36-55, and 40 patients belong to age group 56-75. Another similar study shows the demographics as following; the overall average age was 60.134, range from 26 to 80 years old72 males (35.8%) and 129 females (64.2%). (Moghazi et al., 2005) The present study's Results suggested that 61% of the patient are hypertensive, and 39% of patients are non-hypertensive. Hypertension is an important cause of CRF. Glodny B, et al., in their study "ultrasonography patterns for Hypertensive patients," they found that renal changes in hypertensive patients are detectable by conventional ultrasound only in very advanced stages of the disease (Glodny et al., 2009). Results of the present study also showed that 37% of patients of CRF have a history of diabetic, and 63% of patients are non-diabetic. This show that diabetes is the second most common cause in CRF patient. Mohammed A. Ali Omer, et al in their study entitled "ultrasonographic characteristics of diabetes impact in kidneys' morphology" they revealed that the diabetes directly affects the kidney morphology by increasing the renal volume and in early-stage cortical thickening is atrophied and become echogenic in latter stage and also shows a significant correlation between kidney size, Body mass index (BMI) and the duration of diabetes. (Omer et al., 2014)According to the present study, 45% of patients had an 0-4 level of serum creatinine, 38% had 4-8, and 17% had 8-12 serum creatinine levels, respectively. Alsafi Ahmed Abdella et al., in their study, recorded "ultrasound finding of renal failure patients and creatinine Serum level relationship" the study revealed that kidneys volume decreases as the creatinine serum level increases (Mohammed, 2016). According to present study there is no correlation of cortical thickness and echogenicity among patients suffering from chronic renal failure because p value is .131, which is greater than the significance level .05, which shows that there is no significant relation between both variables. Therefore, the **Null hypothesis** (**H0**: There is no ultrasonographic correlation of cortical thickness and echogenicity among patients suffering from chronic renal failure) was accepted. Same findings were seen in a previous study by Michael D. Beland results shows that average cortical thickness was 5.9 mm (range, 3.2–11.0 mm); average length was 10 cm (7.2–12.4 cm); average minimum serum creatinine was 2.1 mg/dL (1.1–6.1 mg/dL), and average glomerular filtration rate (eGFR) was 34.8 mL/min (10.6–99.4 mL/min). There was a statistically significant relationship between eGFR and cortical thickness ($p < 0.0001$). There was no statistical significant relationship between renal echogenicity and cortical thickness as ($p = 0.08$) (Beland et al., 2010). A study conducted on the topic evaluation of renal changes in diabetic and hypertensive patients using ultrasound and laboratory findings also supports present findings the study concluded that no significant sonographic correlation were observed in cortical thickness, cortical echogenicity and cortico-medullary differentiation(CMD). Estimated glomerular filtration level is the best lab investigation to detect and classify the renal function loss. Serum creatinine level played an important role in the calculation of the estimated glomerular filtration level (eGFR). We cannot depend on blood urea nitrogen (BUN) alone in the detection or determination of renal function loss because it relies on many other factors. Micro-albumin urea is the best lab test to detect small amount of albumin (protein) in urine, and this considers the early sign of renal function loss. In conclusion, lab investigations have superiority to ultrasound in detection and classification of renal function loss(Mohammed, 2016)and concluded that the patients with chronic renal failure the cortical echogenicity increases while decreasing the renal cortical thickness (Moghazi et al., 2005).

Conclusion

On the basis of the findings of the study, the most common disease history in Chronic Renal Failure (CRF) patients was hypertension. The second most common disease history in Chronic Renal Failure (CRF) patients was diabetes. There is no ultrasonographic correlation of cortical thickness and echogenicity among patients suffering from chronic renal failure.

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Sonographic Assessment of Bladder Outlet Obstruction in Adult Males

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Abstract
Background: Bladder outlet obstruction in males may be a complex syndrome of either dynamic functional or fixed anatomic forces resulting in resistance to the flow of urine. Particularly in males, bladder outlet obstruction is a frequently encountered finding. From a diagnostic standpoint, the evaluation of bladder outlet obstruction relies heavily upon traditional methods. BOO may be induced by specific functional and anatomic causes. The resulting obstruction frequently produces lower urinary tract symptoms (LUTS). Categorizing and understanding these entities is crucial when proceeding with a LUTS evaluation as specific diagnostic modalities may then be used to delineate the degree of BOO and any secondary issues fully. Objective(s): The objective was to determine the sonographic assessment of bladder outlet obstruction in adult males Methodology: Ultrasonography for the diagnosis of BOO was done by a single operator using the Mindray Z5 and Toshiba xario 100 with convex transducer probe of 3- 6MHz machine in Mayo hospital Lahore, Allied hospital Faisalabad and Gillani ultrasound clinic, Lahore Pakistan. The duration of the study was from July to October. A total of 159 patients were examined through a convenient sampling technique. Statistical software for social sciences (SPSS version 22.0) is used for the analysis of data. Results: The study included 160 patients in total. Table 1 represents the age of the patients. The minimum age of the patients was 24, and the maximum age of the patients was 90. The mean age of the patients was 52. Table 2 represents the sonographic assessment of the patients. Out of 160 patients, 80(50%) had benign prostate hyperplasia, 30(18.8%) had bladder calculus, 22(13.8%) had bladder mass, 28(17.5%) had bladder wall growth. In table 3, 160 patients had a pre-void test. The minimum was 100, and the maximum was 400. The mean was 2.82. According to table 4, 160 patients had post void test. The minimum was 55, and the maximum was 170. The mean of the post-void test was 1.08. Conclusion(s): Ultrasound measurement of bladder wall thickness has been proposed as a useful diagnostic parameter in patients with bladder outlet obstruction and other voiding dysfunctions. The complete assessment of LUTS arising from BOO includes Ultrasonography to fully define the obstructive impact on the individual's urinary function and quality of life.

Keywords: Bladder outlet obstruction (BOO), lower urinary tract symptoms (LUTS), Ultrasonography

Introduction

In humans, the bladder is a hollow muscular organ situated at the base of the pelvis. Urine collects in the bladder, fed from the two ureters that connect the bladder with the kidneys. Urine leaves the bladder via

the urethra, a single muscular tube ending in an opening – the urinary meatus, where it exits the body (Frank, 2014). The human bladder is situated below the peritoneal cavity near the pelvic floor and behind the pubic symphysis. In men, it lies in front of the rectum, separated by the recto-vesical pouch, and is supported by fibers of the levator ani and of the prostate gland (Patel and Rickards, 2010). The urinary bladder was one of the first of the body's systems to be investigated by ultrasound. The bladder can be scanned by the suprapubic transabdominal route, whereas the perineal and the intravesical routes are rarely used. Ultrasonic visualization of the bladder and other pelvic structures necessitates a full bladder. The bladder must be examined when comfortably full. The full bladder on the transverse scan appears as a thin-walled (2–3 mm) smooth structure, almost rectangular in configuration. The shape is usually symmetrical, but the left lateral wall may be deformed by the sigmoid colon, particularly when filled with feces. On the sagittal section, the bladder is triangular in shape (Meire, 2001). Bladder outlet obstruction (BOO) is an underlying cause for Lower Urinary Tract Symptoms (LUTS) in a significant proportion of men presenting with these commons symptoms (Rosette et al., 1998). While pressure flow studies (PFS) are considered the gold standard for diagnosing and quantifying BOO, urologists in their routine clinical practice frequently rely on less invasive methods (such as urinary flow rate, post-void residual [PVR], and prostate volume) to assess BOO (Abrams et al., 2002). Bladder ultrasonography is used to assess the following: (1) bladder wall anatomy (thickness and focal abnormalities, presence of diverticula), (2) bladder capacity in milliliters, (3) anatomy of the bladder base, (4) distal ureteric anatomy, (5) post-micturition residual volume, and (6) intravesical filling defects (Cosgrove et.al, 2001). Supra-pubic transabdominal ultrasound with a 3.5–5 MHz transducer is ideal in all age groups. For neonates, 7.5 MHz transducers may be needed (Bala and Chou, 2010). Once the full bladder is scanned, and its volume measured, the patient voids into a standard flow rate machine, having been asked to void as normally as possible without superimposed abdominal straining. Immediately after voiding, the bladder is rescanned, and any residual volume is measured. If there is a large residual volume (≥100mL), the bladder should be rescanned after a second void and that residual urine volume assessed (Sofronievska et al., 2015). BOO in men has traditionally been linked to the prostate. Recent terminological changes have led to the use of benign prostatic obstruction/enlargement (BPO/BPE) as nomenclature to replace previously used eponyms such as benign prostatic hyperplasia (BPH). It is clear that LUTS, in both sexes, is at least partially due to a component of age-related detrusor dysfunction with the subsequent superimposition of other pathologies, most common of which in men is BPO. The appreciation that prostatic glandular and stromal hyper-plasia is not synonymous with BOO or LUTS has allowed a more advanced understanding of the dynamic factors involved in BOO in men (Blaivas and Groutz, 2000). We use ultrasound because it is a noninvasive, unexpansive, and first-line modality to evaluate the causes of BOO (El Din et al.,1996). Management of patients presenting to an outpatient clinic with lower urinary tract symptoms (LUTS) is a complex problem. A proportion of these patients suffer from obstructive benign prostatic hyperplasia. Men proved to have obstruction on the basis of pressure-flow measurements applied to a nomogram have better outcomes after transurethral resection of the prostate; hence, there is a growing need to accurately define bladder outlet obstruction (Florators, et al., 2000). Pressure-flow study is presently the gold standard for diagnosing bladder outlet obstruction, but it is invasive. Newer modalities of investigation are being tried and reported in the literature (Ozawa et al., 2000). Clinicians all over the globe have associated the presence of bladder wall thickness, with the presence of a significant obstruction in men with lower urinary tract symptoms (Hakenberg et al., 2000). Detrusor hypertrophy has been described in association with many different disorders of the lower urinary tract and is not specific for any disease. A significant association between bladder wall mass and outlet obstruction has been described in patients with urinary symptoms (Doubler, 2000). Measurement of bladder wall thickness by supra-pubic ultrasound appears to be a useful predictor of outlet obstruction with a diagnostic value exceeding free uroflowmetry, although it does not represent a substitution to invasive urodynamics (Muller et al., 2000). The bladder thickness index is a sensitive sonographic predictor of infra-vesical obstruction. Application of this index as a noninvasive screening tool for the patient with persistent voiding dysfunction may prove beneficial for identifying infra-vesical pathology (Kumar et al., 2000).

Bladder outlet obstruction (BOO) is known to be associated with a variety of morphological, contractile, and biochemical changes within the bladder (Greenland et al., 2000). The problem of lower urinary tract symptoms (LUTS) has gained global attention owing to its high prevalence among both men and women. The overall prevalence of overactive bladder (OAB) was 11.8%; the rates were similar in men and women and increased with age.[20] Before the age of 40 years, lower urinary tract symptoms are relatively uncommon, but the prevalence increases with age such that a large proportion of men and women aged >70 years may have them

(Coyne et al., 2009). In European Prospective Investigation into Cancer and Nutrition (EPIC), a large population-based study, the prevalence of at least one LUTS, using the 2002 International Continence Society (ICS) definitions, was found to be 62.5% in men and 66.6% in women aged ≥40 years (Boyle et al., 2003).

Results

The study included 160 patients in total. Table 1 represents the age of the patients. The minimum age of the patients was 24, and the maximum age of the patients was 90. The mean age of the patients was 52. Table 2 represents the sonographic assessment of the patients. Out of 160 patients, 80(50%) had benign prostate hyperplasia, 30(18.8%) had bladder calculus, 22(13.8%) had bladder mass, 28(17.5%) had bladder wall growth. In table 3, 160 patients had a pre-void test. The minimum was 100, and the maximum was 400. The mean was 282. According to table 4, 160 patients had post void test. The minimum was 55, and the maximum was 170. The mean of the post-void test was 108.

Table 1: Age distribution of patients presented with bladder outlet obstruction

	N	Minimum	Maximum	Mean	Std. Deviation
Age	160	24.00	90.00	51.9375	14.47257
Valid N (listwise)	160				

Table 2: Sonographic findings in patients presented with bladder outlet obstruction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Benign prostate hyperplasia	80	50.0	50.0	50.0
	Bladder calculus	30	18.8	18.8	68.8
	Bladder mass	22	13.8	13.8	82.5
	Bladder wall growth	28	17.5	17.5	100.0
	Total	160	100.0	100.0	

Table 3: Pre-void test in patients presented with bladder outlet obstruction

	N	Minimum	Maximum	Mean	Std. Deviation
prevoidinml	160	100.00	400.00	282	61.99641
Valid N (listwise)	160				

Descriptive Statistics

Table 4: Post void test of patients presented with bladder outlet obstruction

	N	Minimum	Maximum	Mean	Std. Deviation
postvoidinml	160	55.00	170.00	108	28.96478
Valid N (listwise)	160				

DISCUSSION

The current study was designed to determine the bladder outlet obstruction in males. The main reasons for bladder obstructions come out to be the masses and wall growth. Comparing to this, in a study, Bladder outlet obstruction was compared with dretursor wall thickness. A total of 50 men were included in the study. Men aged 50 or older presenting with lower urinary tract symptoms were evaluated for bladder outlet, obstruction using detrusor wall thickness (measured by a transabdominal 7.5 MHz ultrasound) and, other non-invasive tools (namely uroflowmetry, post-void residual, and prostate volume), and the results were compared to pressure-flow study. In my study, in 28 patients, bladder outlet wall thickness became the reason for bladder outlet obstruction. Despite a consensus on pressure-flow studies being the most reliable tool to establish BOO, the generalized use of PFS to diagnose BOO in men presenting with LUTS has been limited by factors such as invasiveness, cost, availability, and potential morbidity. In another study, conducted by Sachin Malde, a total of 42 studies recruiting 4444 patients were eligible for inclusion criteria, which assessed the diagnostic accuracy of nine noninvasive tests were studied. Where-as, in my study, pre-void, and post-void tests were also performed. The mean of the pre void test was 2.8, and that of the post-void test was 1.2. The main outcomes of my study were benign prostate hyperplasia, Bladder calculus, Bladder mass, and Bladder wall growth. Measurement of bladder wall thickness appears to be a useful predictor of outlet obstruction with a diagnostic value exceeding free uroflowmetry, although it does not represent a substitution to invasive urodynamics. These data support the hypothesis that the relationships between morphology and function are of clinical importance. Ultrasound measurement of bladder wall thickness has been proposed as a useful diagnostic parameter in patients with bladder outlet obstruction and other voiding dysfunctions. The complete assessment of LUTS arising from BOO includes Ultrasonography to fully define the obstructive impact on the individual's urinary function and quality of life

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Frequency of Diastolic Dysfunction in Hypertensive Patients by Echocardiography

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Abstract
Background: Echocardiography is often the imaging modality of choice in hypertensive patients with diastolic dysfunction. Diastolic dysfunction may be exacerbated during exercise, especially if there is a marked increase in SBP. Doppler echocardiography has become the standard method for identifying and characterizing diastolic function. The management of diastolic dysfunction is audited, examining the relationship between symptom duration, use of pre-operative radiological imaging, and patient outcome. Objective: To determine the frequency of diastolic dysfunction in hypertensive patients by echocardiography. Methodology: Echocardiograph was done by a single operator using the (Toshiba power vision ® echocardiography) machine in Punjab Institute of Cardiology (PIC), Lahore Pakistan. The duration of the study was from July to October. A total of 48 patients were examined through a convenient sampling technique. Statistical software for social sciences (SPSS version 22.0) is used for the analysis of data. Results: A total of 48 patients were examined in the study. According to table 1, the mean age of the patients was 56.8. The minimum age was 40 and the maximum age was 80. The standard deviation was 10.14. According to table 2, 19(39.6) patients were females, and 29(60.4) patients were males. According to the table 3, 26(54.2) patients had diastolic dysfunction, and 22(45.8) did not have diastolic dysfunction. According to table 4, Out of 26 patients who were suffering from diastolic dysfunction, 14(29.2) patients had Grade 1 type diastolic dysfunction, and 12(29.0) had Grade 2 type of diastolic dysfunction. Conclusion: Diastolic dysfunction should be considered in the patient presenting with heart failure symptoms but with normal systolic function, particularly in hypertensive patients with left ventricular hypertrophy.

Keywords: Echo-Cardiography, Diastolic Dysfunction, Hypertension

Introduction

Diastolic dysfunction (DD) is defined as "the inability of the LV to fill during rest or exercise, to a normal end-diastolic volume without an abnormal increase in LV ends diastolic pressure (LVEDP) (Appleton et al., 2000). The impaired diastolic function identifies hypertensive patients at increased cardiovascular risk, independently of left ventricular (LV) mass and ambulatory BP (Simone and Palmieri, 2001). It is thought that diastolic dysfunction begins early in hypertensive heart disease. The complex interplay of pressure and volume changes lead to various changes in wall dimension and geometric adaptations (Devereux et al., 2004). Diastolic function

parameters can be influenced by several factors such as age, left ventricular inflow, heart rate, left ventricular wall and chamber dimensions, systolic, and diastolic blood pressure (BP) (Balci and Yilmaz, 2002). Achieving good BP control and enhancement in systolic function has been shown to correlate with improvement in diastolic function in early hypertensive subjects (Almuntaser et al., 2009). Diastolic dysfunction is a common complication of chronically elevated blood pressure. Hypertension as a cause of congestive heart failure frequently is under-recognized, partly because, at the time the heart failure develops, the left ventricle at the stage of diastolic dysfunction is unable to generate the high blood pressure, thus obscuring the etiology of the heart failure (Beckett et al., 2008). High blood pressure is more prevalent in the general population. Hypertension significantly contributes to cardiovascular (CV) morbidity and mortality by causing substantial structural and functional adaptations, including diastolic dysfunction (DD), left ventricular hypertrophy (LVH), ventricular and vascular stiffness (Kolo et al., 2012). Chronic hypertension is the most common cause of diastolic dysfunction and failure (Verdecchia et al., 1990). Abnormalities of ventricular relaxation and the consequences of diastolic dysfunction may signify myocardial end-organ damage in patients who have hypertension, which precedes ventricular hypertrophy (Solomon et al., 2007). Isolated diastolic dysfunction is the impairment of isovolumetric ventricular relaxation and decreased compliance of the left ventricle. Symptomatic diastolic dysfunction is called diastolic heart failure (Aeschbacher et al., 2001). With diastolic dysfunction, heart meets the body's metabolic needs, whether at rest or during exercise, but at a higher filling pressure. With mild dysfunction, late filling increases until the ventricular end-diastolic volume returns to normal (Nadruz et al., 2017).

The rationale of the study is to determine the frequency of diastolic dysfunction in hypertensive patients by echocardiography as is it easiest and cheapest gold standard test for diagnosing different heart issues.

Methodology

A cross-sectional study was carried out at Punjab Institute of Cardiology (PIC) Lahore, Pakistan. The duration of study was from July 2019 to October 2019. 48 patients were chosen subsequent to fulfill consideration (inclusion) and rejection (exclusion) criteria. A complete study and investigation were finished. All necessary examination was done. Diastolic dysfunction in hypertensive patients was confirmed by echocardiography of the patients. Statistical software for social sciences (SPSS version 22.0) is used for the analysis of data.

Results

According to the table 1, the mean age of the patients was 56.8. The minimum age was 40 and the maximum age was 80. The standard deviation was 10.14.

Table 1: Age

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
age	48	40.00	80.00	56.8542	10.14572
Valid N (listwise)	48				

Figure 1: Age

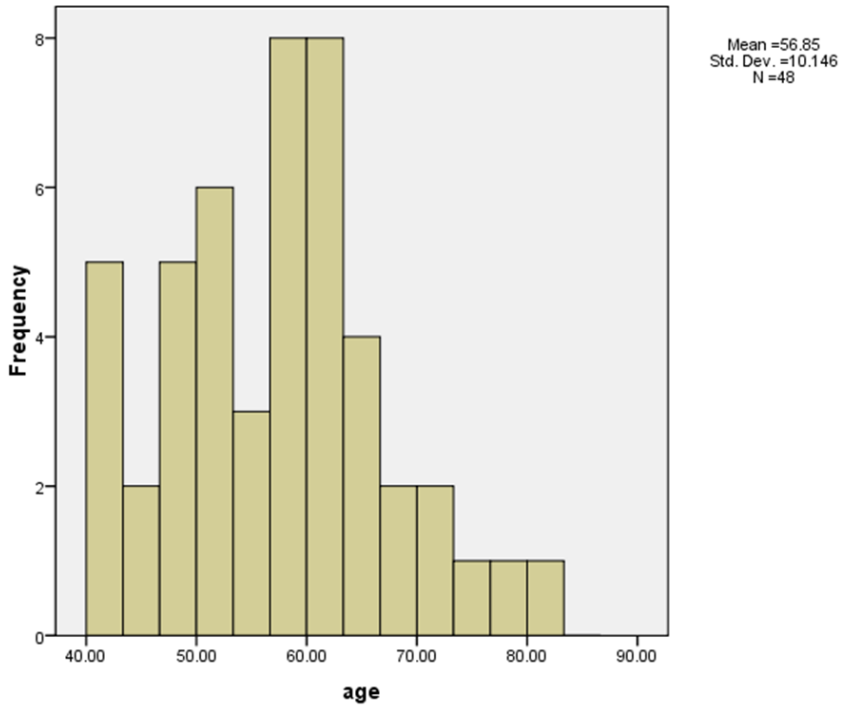


Table 2: Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	female	19	39.6	39.6	39.6
	male	29	60.4	60.4	100.0
	Total	48	100.0	100.0	

According to table 2, 19(39.6) patients were females and 29(60.4) patients were males.

Figure 2: Gender

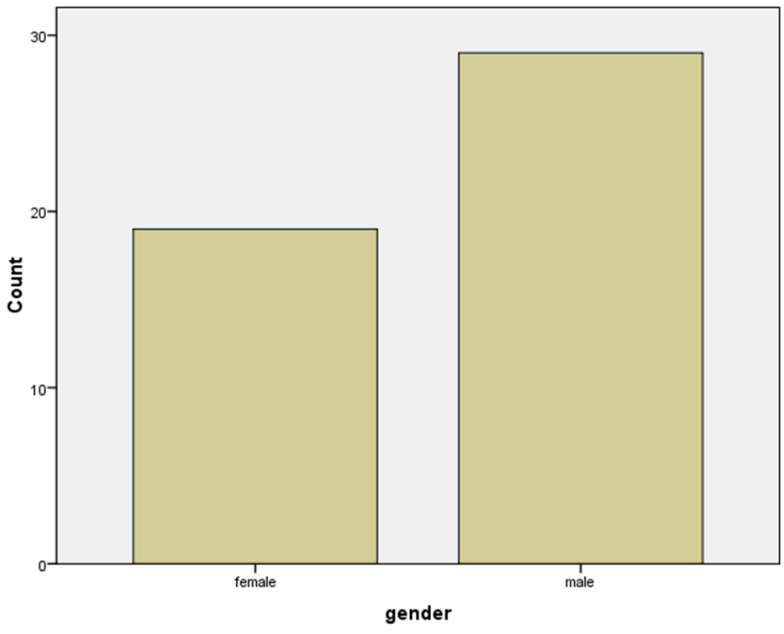


Table 3: Diastolic dysfunction

Diastolic Dysfunction					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	22	45.8	45.8	45.8
	yes	26	54.2	54.2	100.0
	Total	48	100.0	100.0	

According to the table 3, 26(54.2) patients had diastolic dysfunction and 22(45.8) did not had diastolic dysfunction.

Figure 3: Diastolic Dysfunction

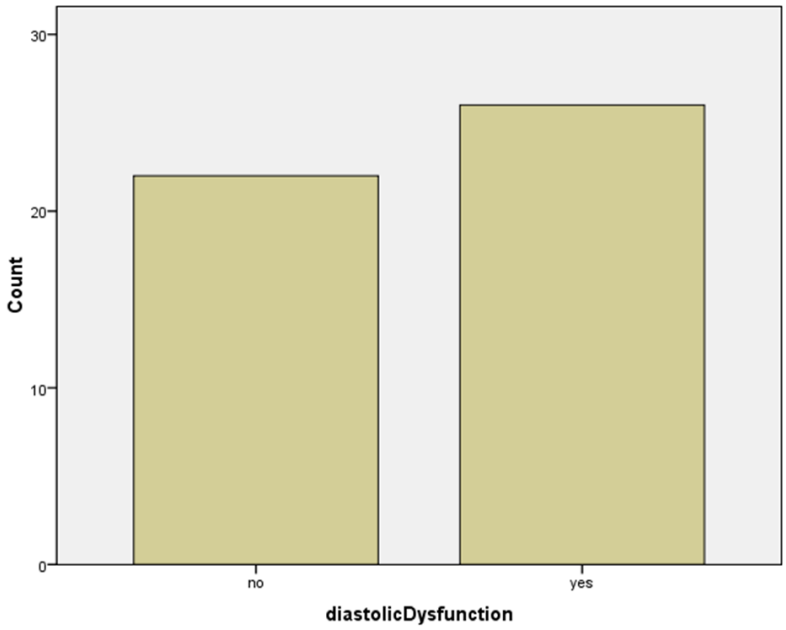
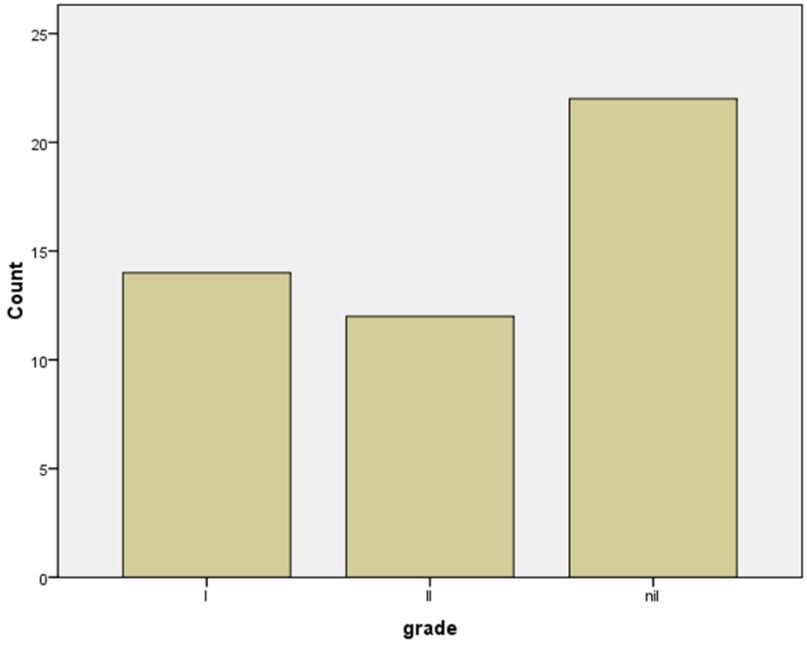


Table 4: Grade

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I	14	29.2	29.2	29.2
	II	12	25.0	25.0	54.2
	nil	22	45.8	45.8	100.0
	Total	48	100.0	100.0	

Figure 4: Grade



Discussion

The current study was designed to determine the Frequency of Diastolic Dysfunction in Hypertensive patients by Echocardiography. In 2003 RedField MM studied Burden of systolic and diastolic ventricular dysfunction in the community: appreciating the scope of the heart failure epidemic. Overall, 20.8% of the population had mild diastolic dysfunction, 6.6% had moderate diastolic dysfunction, and 0.7% had severe diastolic dysfunction, with 5.6% of the population having moderate or severe diastolic dysfunction with normal EF. The prevalence of any systolic dysfunction (EF < or =50%) was 6.0% with moderate or severe systolic dysfunction (EF < or =40%) being present in 2.0%. In comparative to my study, out of 48 patients, 26 were diagnosed with diastolic dysfunction. Among these 26 patients, 14 had Grade 1, and 12 had Grade 2 type of Diastolic dysfunction. In my study, the objective was to determine the frequency of diastolic dysfunction in hypertensive patients by echocardiography. In my study, 48 patients were subjected. Out of these 28, 26 had diastolic dysfunction of grades 1 and 2. In my study, out of 48 patients, 19(39.6) patients were females, and 29(60.4) patients were males. 26(54%) had diastolic dysfunction, and 22(45.8) did not have diastolic dysfunction, and 48 out of 48 patients had hypertension. Doppler tissue imaging has been developed to assess ventricular wall-motion velocity quantitatively for patients with various types of heart disease. This technique has a possibility of assessing right ventricular (RV) function reserve during exercise. The rationale of the study is to determine the frequency of diastolic dysfunction in hypertensive patients by echocardiography as is it easiest and cheapest gold standard test for diagnosing different heart issues.

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Transpedicular Percutaneous Vertebral Biopsy: About Six Cases

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Abstract
The vertebral biopsy is the method of choice to confirm the diagnosis of localized infectious and tumoral lesions of the spine. It can be performed percutaneously or in the open. The percutaneous route has largely supplanted surgical biopsy with a minimally invasive spinal approach and diagnostic efficiency. The transpedicular biopsy is the most classic. We report our experience through a series of six cases of transpedicular vertebral biopsy collected during a two-year period in the neurosurgery department at Mohamed VI University Hospital in Oujda Morocco.

Keywords: Vertebral Biopsy, Spinal Lesion, Transpedicular Percutaneous Biopsy

1. Introduction

The vertebral biopsy provides a tissue sample for histopathological and/or bacteriological examination of the spine lesion. It is indicated in patients who present for spinal pain and whose biological and radiological explorations remain non-specific, and requires a histological and microbiological evaluation for diagnostic confirmation and allow for adequate therapeutic management(Möller et al., 2001; Kamei et al., 2015). The open biopsy is the standard gold for wide tissue sampling and a diagnostic certainty rate of 98% but is still associated with a high rate of complications and morbidity (Chooi et al., 2007; Yapici et al., 2015). The Percutaneous biopsy is considered to be a less invasive, safer and low-cost technique (Hadjipavlou et al., 2003). The transpedicular pathway represents a particularly interesting pathway for biopsy of thoracic and lumbar vertebral lesions with high sensitivity and specificity and a low rate of complications (Pierot and Boulin, 1999; Shrestha, Shrestha and Dhoju, 2015).

2. Patients and Method

This is a retrospective study of six cases of transpedicular percutaneous vertebral biopsies performed over a period of two years in the neurosurgery department at the Mohammed VI Oujda University Hospital center.

3. Results

Six cases were collected in our study, including three men and three women. The sex ratio was 1. The average age was 55. A history of breast carcinoma was noted in one case. The average consultation delay time was 8

months. The clinical picture was dominated by spinal pain in all six cases, at the lombosacral spine. There wasn't any neurological deficit. All of our patients received a CT scan of the spine completed by an MRI. The vertebral lesions were localized in the lombosacral spine: the 5th lumbar vertebra was the most common. Our patients had transpedicular percutaneous vertebral biopsy by trocar under fluoroscopy guidance. Three of our patients (50%) had a biopsy of two vertebrae. Biopsies established a diagnosis in all six cases (100%).

The results were represented by:

- Tuberculosis Spondylodiscite: one case.
- Non-specific infectious spondylodiscite: two cases.
- Metastasis breast carcinoma: one case.
- Large cell lymphoma: one case.
- Plasmocytom: one case.

No post-operative complications were noted.

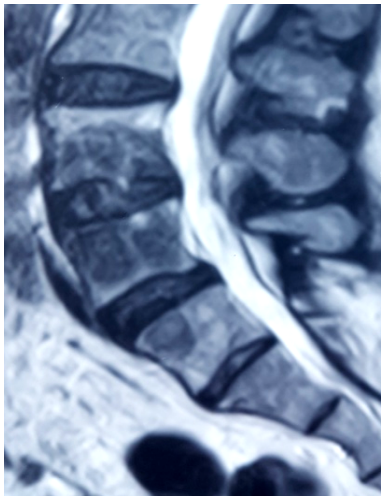

Figure 1. Lumbar MRI showing hyposignal lesion of L4 and L5 vertebral bodies

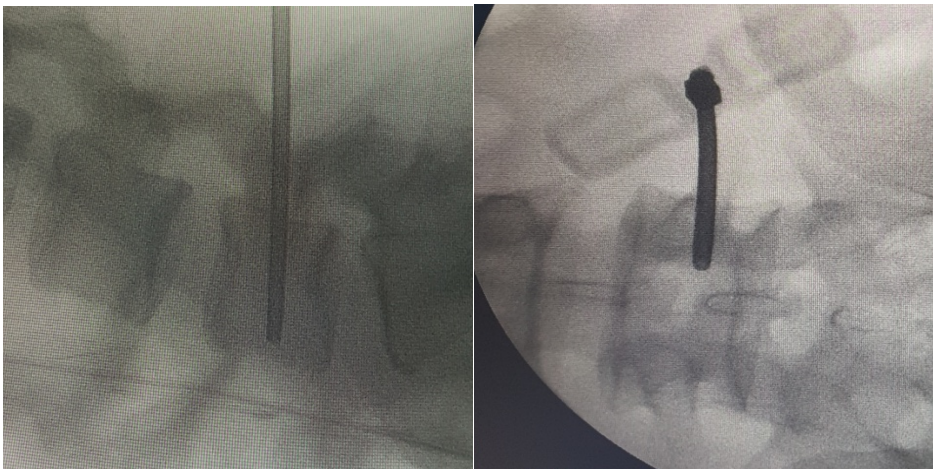

Figure 2. Transpedicular percutaneous vertebral biopsy of L5 under fluoroscopic guidance face and profil, result of biopsy: metastasis of breast carcinoma

4. Discussions

The percutaneous biopsy was first performed in 1935 by Robertson and Ball and, Several pathways were described as posterolateral, transcostovertebral and transpedicular (Chamakeri et al., 2017). The study of spinal

morphometrics has led to a better understanding of the anatomy of the pedicule and its potential as a pathway for spinal lesion biopsy (Kamei et al., 2015). Currently, the transpedicular approach is considered as an interesting alternative compared to other pathways to perform a biopsy of thoracic and lumbar vertebral lesions with high sensitivity and specificity (Dave et al., 2009). In addition, the transpedicular pathway prevents complications associated with paravertebral biopsies, particularly at the thoracic level (Chooi et al., 2007).

Stringham et al. and Jelinek et al. reported the first series of transpedicular percutaneous vertebral biopsy(Stringham et al., 1994; Jelinek et al., 1996). The transpedicular biopsy can be performed under local anesthesia with a short hospital stay, making it the technique of choice given to its low cost and the possibility of monitoring nerve roots. General anesthesia is usually used for children and for patients who are unable to stand still during the procedure (Möller et al., 2001).

The transpedicular percutaneous vertebral biopsy can be done under fluoroscopic or scannographic guidance. The fluoroscopy guidance technique, characterized by its availability and accessibility, allows instant and continuous control of the position of the biopsy trocar with a short procedure time, that It is as effective as scan guidance (Tehranzadeh et al., 2007).

Nourbakhsh et al. (Nourbakhsh et al., 2008) proved that there is no difference in diagnostic rate or quality of removal of vertebral biopsies performed under fluoroscopy or CT. In addition, the fluoroscopy biopsy has been others advantage such as the aseptic environment of the operating room and low cost.

The diagnostic rate of transpedicular percutaneous biopsies varies as described in the literature. Kamei et al. (Kamei et al., 2015) and Moller et al. (Möller et al., 2001) reported a rate of 93.8%, but for Pierot (Pierot and Boulin, 1999) the rate was 89%. A lower rate may be due to the use of a small diameter trocar. The vertebral sample with a diameter of 2 mm or more can be used to achieve high diagnostic accuracy. Stringham et al. reported that a biopsy trocar diameter of 3 mm as average allows to collect a tissue sample of 2mm, which is compatible with the majority of pedicles at the thoracic and lumbar level(Stringham et al., 1994). Also, it allows a secure insertion of the biopsy of the vertebral body. Moller et al. obtained an adequate tissue sample for 91.2% of the biopsies performed(Möller et al., 2001).

Several types of biopsy instruments are available to perform a percutaneous spinal biopsy, but an adequate bone sample with minimal crushing effect should be the primary objective when choosing the instruments for biopsy (Shrestha et al., 2015).

A small diameter sample may be adequate for the diagnosis of tuberculosis, myeloma, osteomyelitis, but when more histological details are required, such as for a malignant tumor, a larger diameter sample is required (Möller et al., 2001).

The diagnostic rate of osteolytic lesions is 94% and sclerotic lesions are 75%. The sclerotic lesions are more difficult to biopsy, hence the value of using trocars and needles for biopsy (Kamei et al., 2015) (Dave et al., 2009).

In spinal tuberculosis, histological and bacteriological examination is rarely diagnostic. The search for the DNA of mycobacterium tuberculosis through PCR is of considerable input. The culture of biopsy sampling in nonspecific germ infectious spondylodiscite yields the best results. Staphylococcus aureus is the most common germ. In tumor lesions, histological examination remains the method of choice (Chooi et al., 2007).

The complication rate of transpedicular vertebral biopsies is estimated between 0.2% and 5.9%. Complications include pneumothorax, active bleeding, hematoma, vascular wound, nerve damage (radicular or spinal cord), and infection. Some cases of transient paraparesis, transient paraplegia, meningitis, and death have also been reported (Möller et al., 2001; Kamei et al., 2015).

The decrease in the rate of complications, reported in the series, is related to the experience gained during transpedicular screwing osteosynthesis and the improvement of knowledge of vertebral morphometrics, as well

as the choice of a vertebra to biopsy after a good radio-clinical evaluation (Chamakeri et al., 2017). Transpedicular biopsy by a unilateral approach provides access to more than 50% of spinal body lesions. An appropriate tissue sample can be obtained by the variation in the direction of the biopsy. However, some areas of the vertebral body are inaccessible by transpedicular route, such as the upper and lower areas of the posterior part of the vertebral body as well as the area in front of the spinal canal, from which to consider other (Kamei et al., 2015; Shrestha et al., 2015).

Finally, the anatomical relationship of the pedicle with the nervous elements underlines the importance of maintaining the integrity of the inner and lower wall of the pedicle.

5. Conclusion

The vertebral biopsy is the examination of choice to confirm the diagnosis of infectious and tumor lesions of the spine. It can be done percutaneously or open surgery procedures. Percutaneous biopsy largely replaced surgical biopsy because it is less invasive with less complication. Transpedicular biopsy gives a better efficiency rate in terms of diagnostic, which allows for appropriate therapeutic management. A transpedicular biopsy allows the reach of most spinal lesions with sufficient tissue sampling for diagnosis. The low risk of complications makes the transpedicular approach an effective alternative to other procedures.

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Frequency of Nasal and Paranasal Sinus Polyps by Computed Tomography

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Abstract
Sinonasal disease is one of the most common clinical head and neck pathologies. The major symptom of sinonasal polyps that help in diagnosis is nasal obstruction. On Computed Tomography, sinonasal polyposis appear as round soft tissue masses originating from the mucosal lining of sinonasal cavity. Objective of this research is to check the frequency of nasal and paranasal sinus polyps by Computed Tomography. By the use of cross sectional descriptive study and convenient sampling, 59 patients were included in the study of all age groups. Patients affected with trauma or any disease resembling sinonasal disease were excluded. 128 slice Philips machine was used to obtain coronal and axial views images. SPSS 20 was used for the statistical analysis, frequencies and percentages. Total patients selected for this research were 59 out of which sinonasal polyposis affected 15 people (25.4%) which were mostly males 55.9% at an average age of 35.5 years. The mostly occurring symptom of this disease is nasal obstruction along with mucosal thickening which was found to be present in 64.4% patients. Most commonly multiple sinuses (72.9%) were affected bilaterally (61%) and bone erosion (13.6%) was found to be a less frequent variable. Males were more affected than females. This study concluded that paranasal polyps occur frequently rather than Nasal polyps.

Keywords: Sinonasal Polyposis, Computed Tomography, Frequency

Introduction

Nasal polyps are the sinonasal lesions of mucosal lining of sinuses that can result in response to inflammatory or infectious trigger (TRITT S, 2008). They appear as smooth, round, semi-translucent lesions that are most commonly occur in the middle meatus and ethmoid sinuses and 1% to 4% of the population is affected (FOKKENS W, 2007). On average there is a 2:1 male to female preponderance18. Males are almost 63% more likely to be affected than females but not a single environmental or hereditary factor has been properly related to the origin and development of this pathology till date (WHITNEY W. STEVENS M, 2016), (AHMAD MEYMANE JAHROMI, 2012). The causative agents are still unknown but there is a strong association with allergy, infection, and asthma and aspirin sensitivity (CASALE MP, et al., 2011). Because of an unknown etiology and a tendency to recur, they represent a challenge in diagnosis for the physician to treat (JONATHAN RAY NEWTON, 2008). Inflammatory polyp was the most frequently seen in sinonasal region with a peak in 20's and 30's of life (DINESH GARG, 2014). Nasal polyps are mostly benign, seen bilaterally, and frequently develop in adulthood. Unilateral nasal polyps should be checked for malignancy, and nasal polyps found in children should be evaluated for underlying cystic fibrosis (WHITNEY W. STEVENS M P. R., 2014). The

major symptom of sinonasal polyps is nasal obstruction which surely exists but its extent can vary depending on the site and size of the polyps. Patients will also frequently complain of anosmia, voice changes, rhinorrhea, snoring, ear problems, and mouth breathing is also common, post nasal drip, and less commonly facial pain (WHITNEY W. STEVENS M P. R., 2014). Family history of asthma and allergy is also important (N. MYGIND, 2000).

CT scan images have replaced conventional x-ray imaging. With the advances in CT / MRI imaging, plain radiographs are losing their importance as far as diagnosis is concerned (THIAGARAJAN B, 2013). In analyzing nasal polyps, computerized tomography is useful in determining the extent of the pathology and in surgical planning (CINGI CD, 2011). Computed tomography images can provide extensive information about the anatomy and anomalies of the paranasal sinus than plain films specifically pathologies within the sphenoid and ethmoid sinuses (RUQQAYIA ADIL, 2011). CT diagnosis has higher sensitivity, specificity, PPV and NPV in diagnosis of chronic sinusitis, sinonasal polyps, fungal sinusitis and other lesions compared to clinical diagnosis (RASHMI KANDUKURI, 2016). Computed tomography is a quick and easily accessible imaging technique. The technique is well tolerated and therefore suited to very old or fragile patients as well as children, people with claustrophobia, or patients who are critically ill and is essential if surgical treatment is to be implemented (HIMANSHU VARSHNEY, 2016). Paranasal sinuses CT images are beneficial for FESS as they provide information and help the surgeon in planning operation because coronal images show the appearance of the sinonasal region for the endoscope (GOTWALD TF, 2001). On computed tomography nasal polyps appear as rounded soft tissue masses originating from the mucosal lining of nose and paranasal sinuses. Rarely polypoidal mass is attached through a pedicle to the nasal mucosal lining can be observed in the CT images (pedicle sign). These effects include local bone remodeling. Nasal polyps don't show enhancement on injection of contrast media (VAISHALI S. SANGOLE SPR, 2013). Mucosal polyps occupy and damage the nasal cavity and the paranasal sinuses. They appear hypo dense, but may appear hyper dense due to increase in the content of protein or fungal sinusitis associated with locally occurring benign bone remodelling or bone destruction (LIANG EY, 1996). Sino nasal polyps can lead to complications like high recurrence of polyposis, asthma that can become worse due to chronic sinusitis, inhalant allergy, and obstructive sleep apnea (ADAM P. CAMPBELL, 2017).

Nasal polyps cannot be cured but treated by medications. Corticosteroids and pills are the medications often used to treat sinonasal polyps. Antibiotics are prescribed if patient has bacterial sinus infection and if the condition gets worse, patient undergoes surgery (JONATHAN RAY NEWTON K. W.-S., 2008). These sinonasal polyps are typically treated with nasal sprays that contain steroids in them which decrease the sinus mucosal inflammation and reduce the polyps size. If it does not result in improvement of patient, surgical treatment may be advised (JONATHAN RAY NEWTON K. W.-S., 2008).

Finding the frequency of nasal and paranasal sinuses polyps by computed tomography can benefit us in way that it may provide us with the knowledge about how many people on an average are affected by this particular disease.

Methods

It was a cross sectional descriptive technique and convenient sampling, 59 patients were included in the study of all age groups. The study was performed for 3 months after the approval of synopsis. Patients who were affected with trauma or any disease resembling sinonasal disease were excluded. 128 slice Philips machine was the equipment used to obtain coronal and axial views images. SPSS 20 was used for the statistical analysis, frequencies and percentages were found. The study conducted to find out the use of computed tomography scans to analyze the frequency of nasal and paranasal sinus polyps in patients with presenting symptoms and diagnosed with nasal pathology in a selected population.

Results

It was a cross sectional descriptive technique and convenient sampling, 59 patients were included in the study of all age groups. Patients without sinonasal polyps were 15 (25.4%) and patients with sinonasal polyps were 15

(25.4%). Total number of patients selected for this research were 59 out of which sinonasal polyposis affected males about 55.9% most commonly at the age of 35.5 years. The most frequently occurring symptom associated to this disease is nasal obstruction along with mucosal thickening which was found to be present in 64.4% patients. Most commonly multiple sinuses (72.9%) were affected bilaterally (61%) and bone erosion (13.6%)was found to be a less frequent variable.

Table 1: Frequency of male and female Patients.

Gender		
	Frequency	Percent
F	26	44.1
M	33	55.9
Total	59	100.0

Table 2: Unilateral sinuses.

Unilateral Sinuses		
	Frequency	Percent
0	43	72.9
1	16	27.1
Total	59	100.0

Table 3: Bilateral Sinuses.

Bilateral Sinuses		
	Frequency	Percent
0	23	39.0
1	36	61.0
Total	59	100.0

Table 4: Frequency of nasal polyps**.**

Nasal Polyps		
	Frequency	**Percent**
0	**45**	**76.3**
1	**14**	**23.7**
Total	**59**	**100.0**

Table 5: Frequency of nasal polyps.

Paranasal Polyps		
0	44	74.6
1	15	25.4
Total	59	100.0

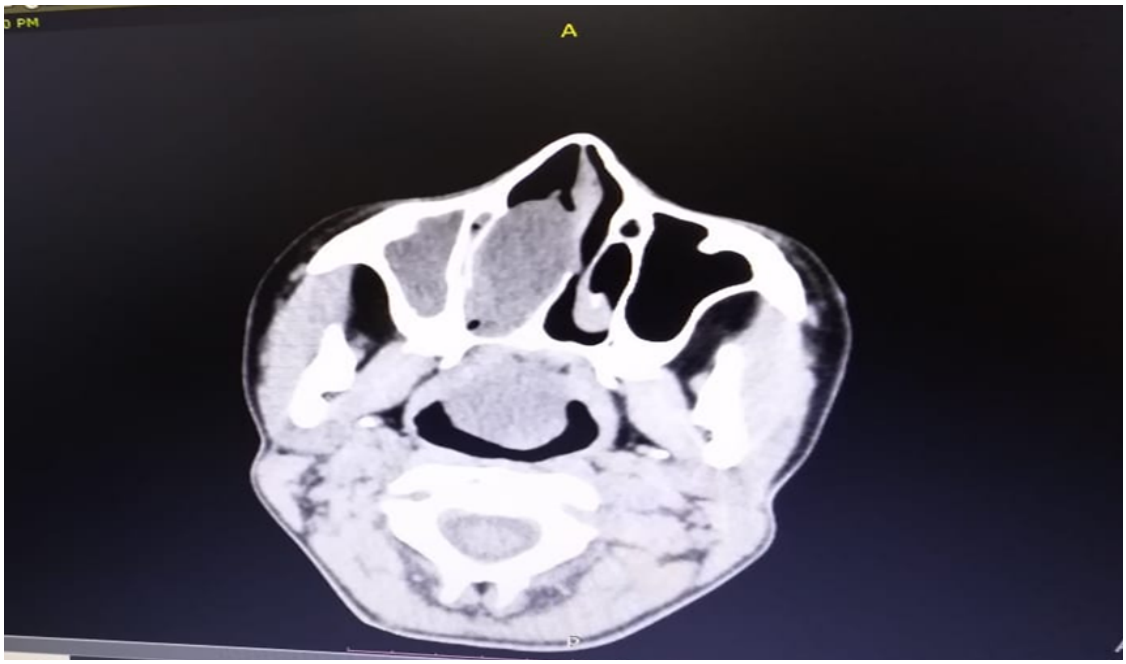

Figure 1: Right sinonasal polyposis involving maxillary and ethmoid sinuses.


Figure 2: Bilaterally occurring polyps involving frontal, ethmoid and sphenoid sinus.

Discussion

It was an observational cross sectional study conducted in the radiology department of Al Razi Healthcare, Lahore. that included 59 patients. The data was collected using consecutive technique from September 2018 to November 2018. A questionnaire was used for each patient, filled out on the basis of history and image findings. Computed tomography technique is useful to detect the sinonasal pathologies such as polyps etc. Nasal polyps are the most common expansible lesions in the nasal cavity. They are associated with allergy, vasomotor rhinitis, and inflammation. In mostly cases sinonasal polyps discovered incidentally have no previous history of sinonasal disease.

According to Abbas O. Hussein's research published in the year 2012, performed in the ENT Khartoum specialist hospital and Ibn El Haitham diagnostic center from 2012 to 2014, total 240 patients were recorded 111 were males while 129 were females. Patients were suspected for having paranasal sinuses disease. X-ray water's view and CT of axial and coronal planes were performed. Females (54%) were more commonly affected than males (46%). Their research shows that the commonly involved pathology of the sinuses was the polyp with 33.8%. Their research reveals that commonly affected sinus was maxillary sinus (72.1%) followed by ethmoid sinus (45.4%) and then frontal (31.7%) and sphenoid sinuses (27.2%). So according to them, for the detection of paranasal sinuses pathologies CT is gold standard method (SAMUEL MÁRQUEZ, 2008).

Study conducted by Leif Johansson and his fellows which was published in 2003. The main target of their study was to find out the prevalence of sinonasal polyps in adults Swedish population co-related to their age, gender, asthma and aspirin sensitivity, a sample of 1900 people above the age of 20 years were selected from the municipal population registered in Skovde Sweden in the month of December in year 2000. The question which were included in the study were about rhinitis, asthma and aspirin insensitivity total 1387 volunteers were investigated. The total prevalence of polyps was 2.7% the polyps were most commonly found in elderly men. It was also found in the asthmatic patients. Aspirin insensitivity was not found to be associated with polyps. This study was considered as the representative of Swedish population (WHITNEY W. STEVENS M P. R., 2016).

Study conducted by Aakanksha Rathore and Abhinandan Bhattacharjee, published in 2017 at Silchar Medical College and Hospital Silchar, India. Total 34 patients were included and CT scan showed 20 patients with 58.9% with sinonasal polyposis. Maxillary sinus was most commonly involved. They concluded that Computed Tomography provides great anatomical information in sinus involvement and variations so CT is the gold standard for diagnosing sinonasal polyposis and the results may also be advisable to endoscopic sinus surgeons (N. MYGIND, 2000).

Study conducted by Satish Nair and his fellows, published in 2013, in their review article they aimed to analyze the different presentation of patients with single sided nasal mass to identify the features of neoplastic pathology. They took the retrospective view of all the cases presented with unilateral nasal mass from Jan 09 to Jan 10 at a tertiary care hospital. In the retrospective review total 53 patients were included 29 females and 24 males. They found that the benign nasal polyp was the most common inflammatory condition and inverted papilloma was common neoplastic disease. In the inflammatory condition CT scan revealed the sinus opacity presence of high attenuated areas without bone erosion. While neoplastic conditions showed significant symptoms and, bony destruction and soft tissue involvement on the CT scans. The CT is modality of choice to differentiate between inflammatory and neoplastic conditions. Biopsy is usually done for neoplastic conditions (FOKKENS WJ LV, 2012).

Study conducted by Hemant Chopra, published in 2008. His aim was to compare the clinical, radiological and histological findings in the patients presented with nasal polyps. He conducted prospective randomized study, 50 patients were included diagnosed clinically and by the use of radiations with nasal polyps in Dayanand Medical College and Hospital Ludhiana. Radiologic investigations included CT scan and MRI of the patients it helped about the extent of disease, type of pathology and its expansion also with destruction of sinus for any type of complication. FESS was performed which was followed by histopathology of the surgically removed polyps. Results showed that 70% of clinical findings were consistent with radiologic findings. He concluded that clinical, radiological and histopathological analysis should be done for proper evaluation of nasal polyps, and radiology provides information about complication and a road map to endoscopic surgeries (S, 1996).

Therefore our study highly supports the above mentioned studies, we only took patients who had the symptoms of nasal and paranasal sinus polyposis. With Computed Tomography frequency of patients affected polyps was found among 59 patients of all ages. Polyposis affected males about 55.9% more commonly at the age of 35.5 years. This frequency is found to be increasing over the years There was no gender specification in this study. The aim of this research work was to observe the role of CT scan for finding out the frequency of patients affected with sinonasal polyps in Lahore, City population. These all radiological confirmative signs were found more accurately on CT and was among those variables that scored high in the frequency column and confirmed the accuracy of CT in the diagnosis of Sinonasal polyposis.

Conclusion

Males were more affected than females. This study concluded that paranasal polyps occur frequently rather than Nasal polyps.

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Frequency of Computed Tomography Paranasal Sinuses in the Evaluation of Sinusitis

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Abstract
Background: Recent advances in the understanding the pathophysiology of paranasal sinuses has revolutionized the surgical management of chronic and recurrent sinusitis. Coronal plane computerized tomographic (CT) scanning has dramatically improved the imaging of paranasal sinus anatomy as compared to sinus radiographs. Increasingly, subtle bony anatomic variations and mucosal abnormalities of this region are being detected. Data regarding the background prevalence of these findings are needed to determine their clinical relevance. Objective(s): To determine the frequency of computed tomography paranasal sinuses in the evaluation of sinusitis. Methodology: A cross-sectional study was conducted at Al-Razi Health Care, Lahore. From May 2018 to September 2019, data of 177 patients were collected through convenient sampling. Adults and children with acute maxillary sinusitis/ rhino sinusitis were included in the study. Data of patients with recent cold associated with irritating runny nose and headache along with congestion was collected from the patients. Statistical software for social sciences (SPSS version 22.0) is used for the analysis of data. Results: Out of 177 patients collected, 82 were females and 95 were males. History of running nose was collected. 51 out of 185 had running nose. 120 patients were presented with headache. 115 had the history of cough. 102 had shortness of breath and 107 had congestion. 59 patients were suffering from cold. The final result came out to be 106 sinusitis patients. Conclusion(s): Pathologies in the maxillary sinus are frequently found in CBCT imaging and have to be treated or followed-up accordingly. CBCT is applicable for diagnosis and treatment planning of clinically present sinusitis.

Keywords: Sinusitis, Computerized Tomography

Introduction

Sinusitis is an inflammation of nasal sinus, it is also known as rhinosinusitis, and is a common medical problem in Ear, Nose, and Throat (ENT) department. Maxillary sinus is one of the four paranasal sinuses held in cheekbones. It shapes like a pyramid and each contains three cavities. They are basically mucus lined cavities that reduce the skull weight, produce mucus, affect the tone quality of a person's voice and they also aids in trapping dust and dirt particles (Lund and Lloyd, 1984). Maxillary sinus drains into nose by an opening called ostia. When these ostia get clogged, sinusitis occurs, making the drainage difficult. Sinusitis may be acute or chronic depending upon the duration of inflammation (Maru and Gupta, 2001). Acute Sinusitis is a short-term

inflammation of membranes of nose and surrounding sinus and is mostly due to cold-causing viral infection, or it may be non-infectious. According to American Academy of Otolaryngology, it affects 1 in 8 adult's per year (Laine et al., 1998). CT has been revolutionised by utilizing differential contrast enhancement characteristics of lesion, a clear distinction between tumor mass and inflammatory tissue can be made out, which is of utmost importance for the treatment of patients (Silberstein, 2004). CT also plays a role in diagnosing the complications and intracranial extension of sinonasal diseases. The CT scan proved to be an excellent imaging tool as it can accurately diagnose and differentiate benign and malignant lesions, can describe the masses in terms of their origin, nature, extension, and involvement (Carmeli et al., 2011) (Carmeli et al., 2011). Now with the unique ability of CT to image the bones and soft tissues, direct coronal scanning, and sagittal reconstruction imaging the space occupying lesions (Gupta et al., 2004). By acting as a roadmap, preoperative CT scan PNS has proved to reduce the post-operative complications of FESS and other surgeries. The multifaceted benefits of CT in PNS over other imaging and diagnostic procedures are countless. The present study was conducted to establish the role of CT in the evaluation of pathologies and their proper early diagnosis (Sabharwal et al., 2006).

Results

Out of 177 patients collected, 82 were females, and 95 were males. History of running nose was collected. 51 out of 185 had running nose. 120 patients were presented with headache. 115 had the history of cough. 102 had shortness of breath and 107 had congestion. 59 patients were suffering from cold. The final result came out to be 106 sinusitis patients.

Table 1: Shortness of breath

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	75	42.4	42.4	42.4
	yes	102	57.6	57.6	100.0
	Total	177	100.0	100.0	

Table 2: Cold

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	118	66.7	66.7	66.7
	yes	59	33.3	33.3	100.0
	Total	177	100.0	100.0	

Table 3: Sinusitis

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	negitive	71	40.1	40.1	40.1
	positive	106	59.9	59.9	100.0
	Total	177	100.0	100.0	

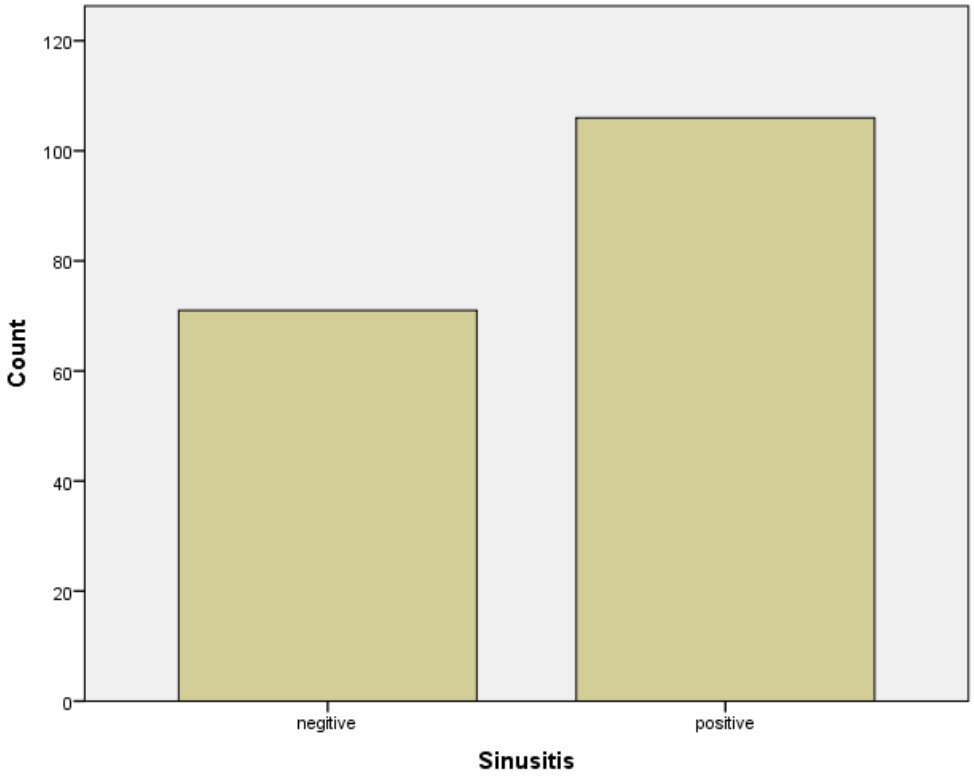

Figure 1: Graph showing the frequency of sinusitis

Discussion

The study here was conducted to conclude the diagnosis of paranasal sinusitis through CT. A history of 177 patients was collected and compared. Among these patients, 106 patients had sinusitis. These patients were presented with a history of cold, cough, shortness of breath. According to the study conducted by James in 2002, it is important to validate that if the definition of chronic rhinosinusitis is based on subjective information, this correlates with objective findings obtained with CT. The diagnosis of chronic rhinosinusitis is based principally on major and minor symptoms, with treatment administered on the basis of this diagnosis. This paradigm was established to avoid the cost and inconvenience of CT scanning to all physicians who see these patients. Patients meeting the definition of chronic rhinosinusitis, a symptom-based definition, are recommended to received several weeks of antibiotics. The otolaryngologist is better suited to the use of objective testing, especially endoscopy, than are other physicians. Nasal endoscopy or CT is not viewed as being necessary to corroborate the diagnosis. This project was undertaken to determine whether the standard definition of chronic rhinosinusitis, alone, was sufficient to make the diagnosis relative to endoscopy and/or CT. The role of endoscopy in the diagnosis of chronic, nonpolyp, unoperated rhinosinusitis was evaluated. The conclusion of my study is that pathologies in the maxillary sinus are frequently found in CBCT imaging and have to be treated or followed-up accordingly. CBCT is applicable for diagnosis and treatment planning of clinically present sinusitis.

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Frequency of Congenital Heart Diseases in Children and Its Clinical Presentations on Echocardiography

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Abstract
Background: Congestive heart failure (CHF) is a chronic progressive condition that affects the pumping power of your heart muscles. While often referred to simply as "heart failure," CHF specifically refers to the stage in which fluid builds up around the heart and causes it to pump inefficiently. An evaluation of screening for CHDs is very important, echocardiography is a non-invasive technique and Modern two-dimensional echocardiographic strategies offer a comprehensive way for evaluating virtually all types of CHD observed in both adults and children. Objective: The aim of this study is to find out the most common clinical presentation of congenital heart defects in children from 3 months to 16 years of age referred to echocardiography and confirm the presence of disease on echocardiography in Children Hospital Lahore. Methods: This is a descriptive and prospective Hospital-based study conducted in the pediatric cardiology unit outpatient department of CHILDREN HOSPITAL. This study included all the patients, irrespective of age, having confirmed the diagnosis of CHD on the basis of echocardiographic report. Results: In my study, 288 patients of clinically Diagnosed CHD referred to echocardiography were studied. Congenital heart defects were diagnosed more commonly between 3 months to 5 Years than other age groups. The reason for the higher incidence in the age group of 3 months to 5 years maybe that CHD becomes symptomatic at that age group. The commonest congenital heart defects with a single lesion in our study were Ventricular septal defect followed by Atrial septal defect, Tetralogy of Fallot, Patent ductus arteriosus Conclusions: We observed that Symptomatic patients mostly present in 3 months -5 years of age. At 0.16-5 year of age child presented with sweating, respiratory distress, syncope and tachypnea. While from 5-16 years, commonest symptoms were murmur, chest pain, respiratory distress, tachypnea. The most symptomatic lesion Congenital heart defects were Ventricle septal defect and Teratology of fallot Ventricle septal defect, Atrial septal defect Pulmonary stenosis. Transthoracic echocardiography is an important tool for confirmation of clinical presentations of CHD at different age group.

Keywords: Congenital Heart Disease, Echocardiography, Clinical Diagnosis

Introduction

As a relevant a part of the circulatory device, the heart is in most cases accountable for pumping blood and dispensing oxygen and vitamins all through the body considered one of the most important organs, such that even small dysfunctions or abnormalities may additionally purpose drastic changes or effects in the human organism. The organ is divided into numerous chambers followed by way of veins and arteries that facilitate the equal characteristic. The valves that separate those chambers are called atrioventricular valves. The systole is a short duration that occurs whilst the tricuspid and mitral valves close; the diastole is a rather longer length while the aortic and pulmonary valves close. The systole-diastole courting is the reference in measuring blood pressure. Other approaches of bodily figuring out the normal functioning of the heart is through examining the heartbeat rate (beats per minute). The interventricular septum separates the right from the left ventricle. The valve among the right atrium and right ventricle are made up of 3 essential leaflets of unequal size. The outlet of the pulmonary artery is guarded by using a valve referred to as the pulmonary valve. This valve prevents the again flow of blood from the pulmonary trunk into the right ventricle when the ventricular muscle relaxes. Two pulmonary veins bring the arterial or oxygenated blood out of each lung. The 4 pulmonary veins empty their contents into the left atrium of the heart. The valve separating the left atrium from the left ventricle is known as the left atrio-ventricular valve, or mitral valve, and consists of cusps. It's far smaller than the tricuspid orifice. Inside the left ventricle, the 2 groups of papillary muscles arise from the junction of the apical and middle 1/3 of the ventricular wall (Mesotten et al.,1998).

Congenital heart disease (CHD) discuss with structural or purposeful heart sicknesses, that are present at delivery. These are visible in neonates, babies and children, even though in our country it is not uncommon to peer adults with uncorrected CHD (Saxena, 2005). The incidence of CHD in extraordinary studies varies from about four/1,000 to 50/1,000 stay births. The relative frequency of different most important kinds of CHD additionally differs greatly from look at to examine. In addition, every other 20/1,000 stay births have bicuspid aortic valves, remoted anomalous lobar pulmonary veins or a silent patent ductus arteriosus (Hoffman and Kalpan, 2002). Congenital heart disease is structural abnormality of heart or blood vessels near the heart, present either on the time of start or detected afterward (MEMON et al.,2012). They are the maximum, not unusual birth defects, happening in zero. Five-0. Eight% of stay births, three-4% of nevertheless births; and 10-25% of abortuses (George and Frank,2009). Non-Invasive Cardiac diagnostic technique (like TTE) plays foremost within the prognosis of CHD. An echocardiography has to be completed without delay (Jatav et al.,2018) Echocardiograms can follow the response to the lower inside the LVOT gradient and improvement in diastolic function following scientific remedy (Levy et al.,2014).An entire-dimensional echocardiography examination to the recommendations of the American Society of Echocardiography (KLEINMAN et al.,1981). Over the beyond 20-30 years, important advances were made in the diagnosis and treatment of CHD. Echocardiography is a non-invasive technique and Modern two-dimensional echocardiographic strategies offer a comprehensive way for evaluating virtually all types of CHD observed in both adults and children (Sani et al.,2007). Congenital heart defects (CHDs) are accountable for up to 40% of all deaths from congenital anomalies and account for 3–7.5% of all infant deaths. An evaluation of screening for CHDs presents numerous challenges as "congenital coronary heart defects" is a time period that includes many exceptional structural heart malformations with various incidence, medical functions, herbal history, interventions, and probable advantage from screening. Moreover a few CHDs, for example, a few muscular ventricular septal defects (VSDs), are of no useful or clinical result and may resolve spontaneously in early life. In figuring out the most useful screening techniques for CHDs, it is vital to bear in mind the perfect goals of screening. The cutting-edge screening pathway for CHDs is complex and sequential screening techniques aren't integrated throughout fetal and neonatal existence neither is the impact of antenatal screening on newborn screening nicely-described (Knowles et al., 2013). Studies of the prevalence of CHD generally estimate the total prevalence and the proportions of different CHDs (Hoffman and Kalpan, 2002). There are minor changes in the different heart defects with seemingly moderate growth in the burden of tetralogy of Fallot and atrial septal defects and a moderate decrease in the burden of patent ductus arteriosus (Abdulkadir, 2016). Consanguinity performs a first-rate role within the occurrence of predominant congenital malformations in kids. The occurrence of CHD is not uniform in our united states, as numerous studies have suggested it ranging from 1 to 50.89 in line with a thousand stay (Kumar B.D et al., 2015). Three-dimensional strategies are actually firmly mounted for imaging of congenital heart defects. Once the 3-dimensional dataset has been received, it can be interrogated in any desired photograph

plane. The viewing alternatives include visualization as a three-dimensional photo or as a two-dimensional image cut in any desired axis (multi-planar reformatted) (Kumar, A et al., 2017). Apparent will increase in the prevalence of CHDs are therefore probable to be due to expanded detection of these minor defects as echocardiography is more often used for cardiac investigation. Life-threatening CHDs consist of the hypoplastic left heart (HLH), interrupted aortic arch (IAA), transposition of the first-rate arteries (TGA), obstructed overall anomalous pulmonary venous connection (TAPVC), coarctation of the aorta (COA), crucial aortic stenosis (AS) and pulmonary atresia (PA). (Simpson,2008).The maximum customary lifestyles-threatening defects at live delivery are coarctation of the aorta (COA) and essential aortic stenosis (AS); the ventricular septal defect is the most common CHD but not likely to result in collapse or to die (Knowles et al., 2013).

Methods

An Observational and Cross-sectional study was conducted at Children Hospital, Ferozpur road Lahore. Our sample size was 288 patients. 288 patients were included after the approval of synopsis from institutional review board (IRB). All the patients of Age group 3 months to 16 years were diagnosedwith congenital heart defect, referred to echocardiography and confirm the presence of disease on echocardiography. Echocardiography machine GE(vivid) was used wasused to perform this research to find out the most common clinical presentation of congenital heart defect in children from 3 months to 16 years of age referred to echocardiography and confirm the presence of disease on echocardiography in Children Hospital. Figure 6 shows a ventricular septal, Dilated MPA and TOF can be diagnosed in Figure 7.

Results

This descriptive study was based on 3 months' time period and 288 patients of congenital heart disease were studied. A Performa was used for each patient, which were filled based on clinical presentation and Echo cardio graphic findings.

Among 288 patients 167(57.98%) were male and 121(42.01%) were female. Their overall ages ranged from 3M-16 years (Table 1). Congenital heart defects were diagnosed more commonly between 3 months to 5 Year (n=208, 72.22%) than from 5-10 years (n=54, 18.75%) and less observed in patients from 10-16 year (n=26, 9.08%)' age groups shown in (table 2). Table 3 shows that the major clinical finding was a detection of a respiratory distress (57.29%) followed by sweating (52.43%), Tachypnea (36.80%), cyanosis (12.15%), syncope (9.37%); murmur (2.77%) fits (1.38%) and spell (0.69%).

Table 4 shows that asymptomatic patients mostly present in 3M-5 years of age. At 3M-5years child presents with respiratory distress, followed by sweating, Tachypnea, chest pain, cyanosis, syncope, murmur, fits, and spell. These were common clinical presentations up to 5 years of age. The commonest clinical presentations in 5-10 years child were respiratory distress and sweating and less common one's clinical presentations are murmur, spell and fits. In 10-16 years, respiratory distress is the most common clinical presentation. Table 4 shows that the commonest congenital heart defects with single lesion confirmed by echocardiography in our study was Ventricular septal defect (n=30, 45.4%) followed by Patent ductus arteriosus (n=14, 21.2%)Tetralogy Of Fallot (n=11, 16.60%), Atrial septal defect (n=7, 10.6%), and complete atrioventricularseptal defect(n=4,6.10%).

Table 5 shows commonest Congenital heart defects in our study was Ventricular septal defects (n=69, 23.95%) followed by Atrial septal defects (n=33, 11.5%) and Tetralogy of fallot (n=29, 10.I%) each . The less common were Patent ductus arteriosus, left ventricle dysfunction, pulmonary stenosis, pulmonary hypertension, and coarctation of the aorta.

TABLE 1: Sex wise distribution of congenital heart diseases

GENDER	FREQUENCY	PERCENTAGE
MALE	167	57.98%
FEMALE	121	42.01%
TOTAL	288	100%

FIGURE 1: Sex wise distribution of congenital heart diseases

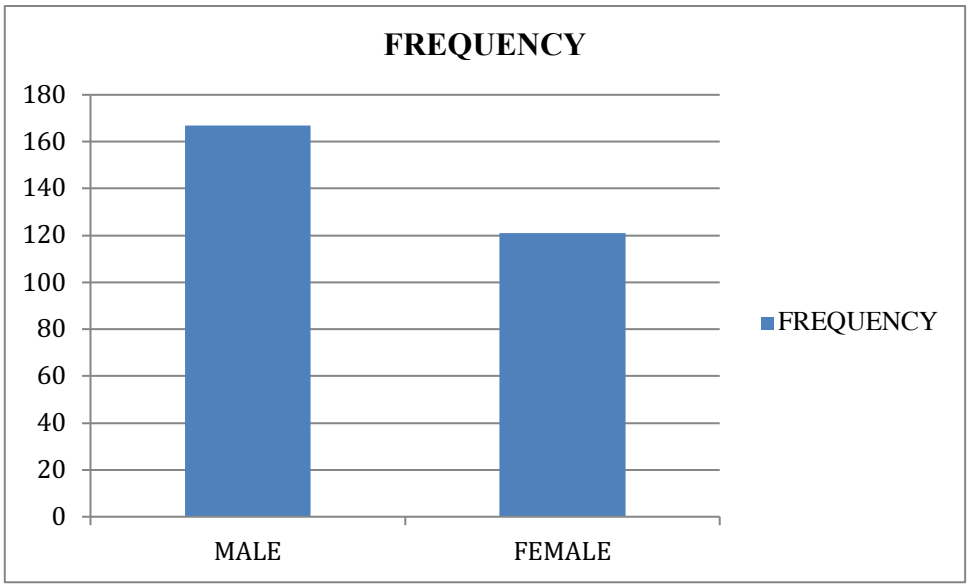


Table 2: Age-wise distribution of CHD among 288 patients

Age	Frequency	Percentage
3M-5y	208	72.22%
5-10y	54	18.75%
10-16y	26	9.03%
TOTAL	288	100%

Figure 2: Age-wise distribution of CHD among 288 patients

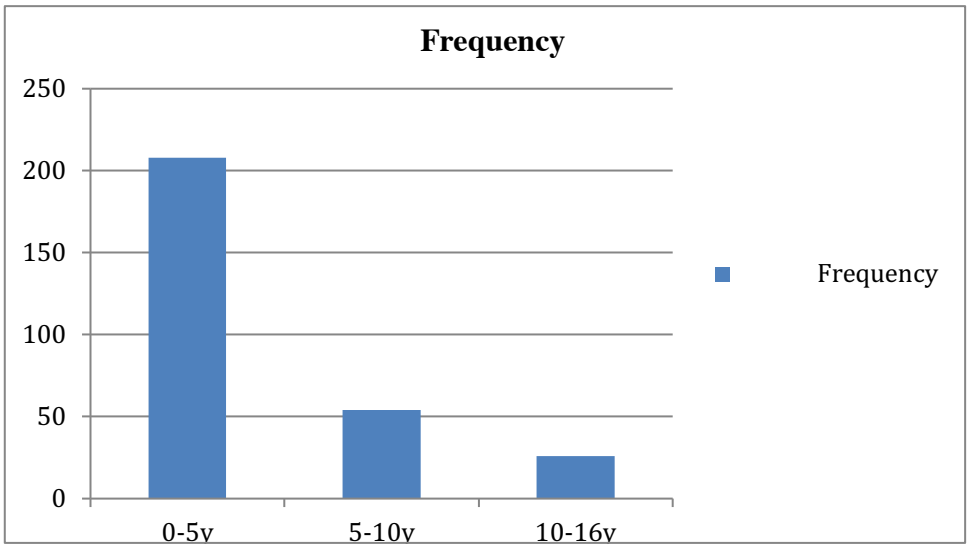


Table 3: Frequency of Clinical findings of the CHD in Symptomatic patients

Clinical findings	Frequency	Percent
Tachypnia	106	36.80%
Respiratory Distress	165	57.29%
Sweating	151	52.43%
Cyanosis	35	12.15%
Spell	2	0.69%
Fits	4	1.38%
Chest Pain	66	22.91%
Syncope	27	9.37%
Murmur	8	2.77%

Figure 3: Frequency of Clinical findings of the CHD in Symptomatic patients

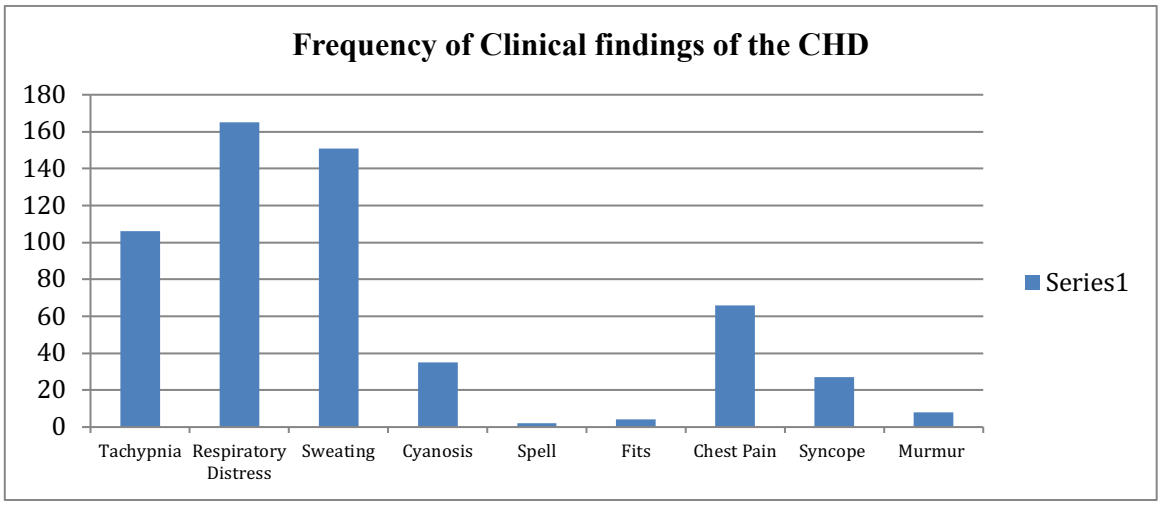


Table 4: Age-wise distribution of clinical presentations of Congenital Heart Diseases

Age	Asymptomatic	Tachypnia	Respiratory distress	Sweating	Cyanosis	spell	Fits	Chest pain	Syncope	Murmur	TOTAL
3M-5 year	61	82	123	109	28	1	2	47	22	5	480 (73.84%)
5-10 year	12	19	32	32	7	0	2	15	4	2	125 (19.23%)
10-16 year	13	5	10	10	0	1	0	4	1	1	45 (6.93%)
Total	86(13.23 %)	106(16. 30%)	165(25.3 8%)	151(23. 24%)	35(5.38 %)	2(0.3%)	4(0.6 %)	66(10.1 6%)	27(4.17 %)	8(1.24 %)	650 (100%)

Figure 4: Age-wise distribution of clinical presentations of Congenital Heart Diseases

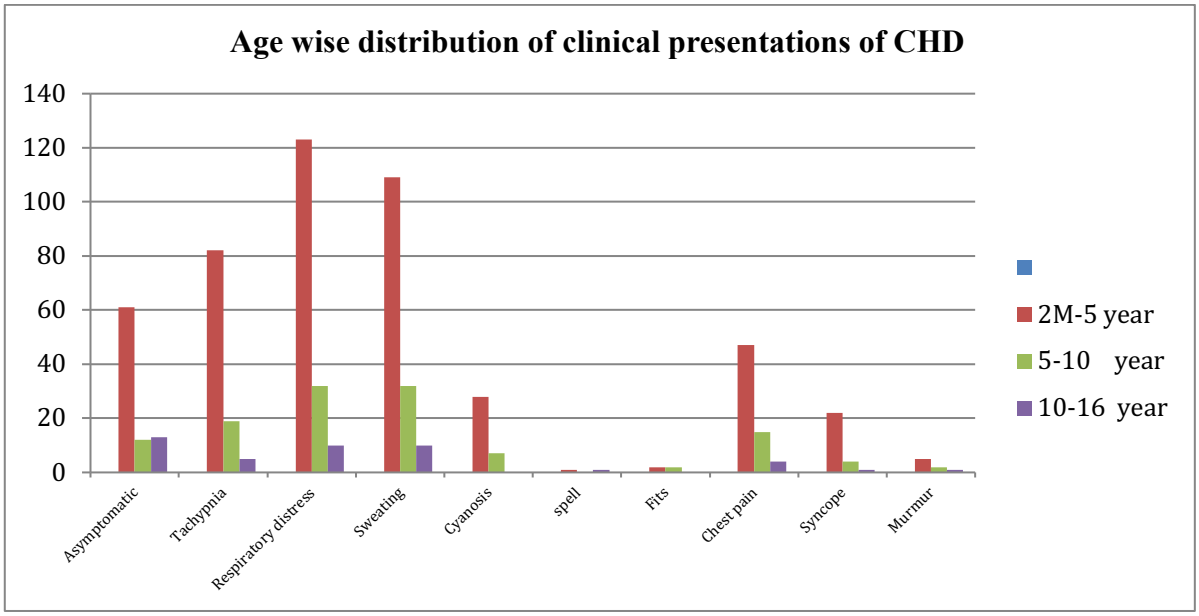


Table 5: Distribution of CHD (Confirmed By Echocardiography)

Diagnosis	Frequency	Percent
ASD	33	11.5%
CoA	4	1.4%
VSD	69	23.95%
PDA	24	8.33%
TOF	29	10.1
RHD	4	1.38%
PS	10	3.4%
P.H	8	2.8%
VALVULAR .AS	4	1.38
NORMAL	85	29.51
LV DISFUNCTION	18	6.25%
TOTAL	288	100%

Figure 5: Distribution of CHD

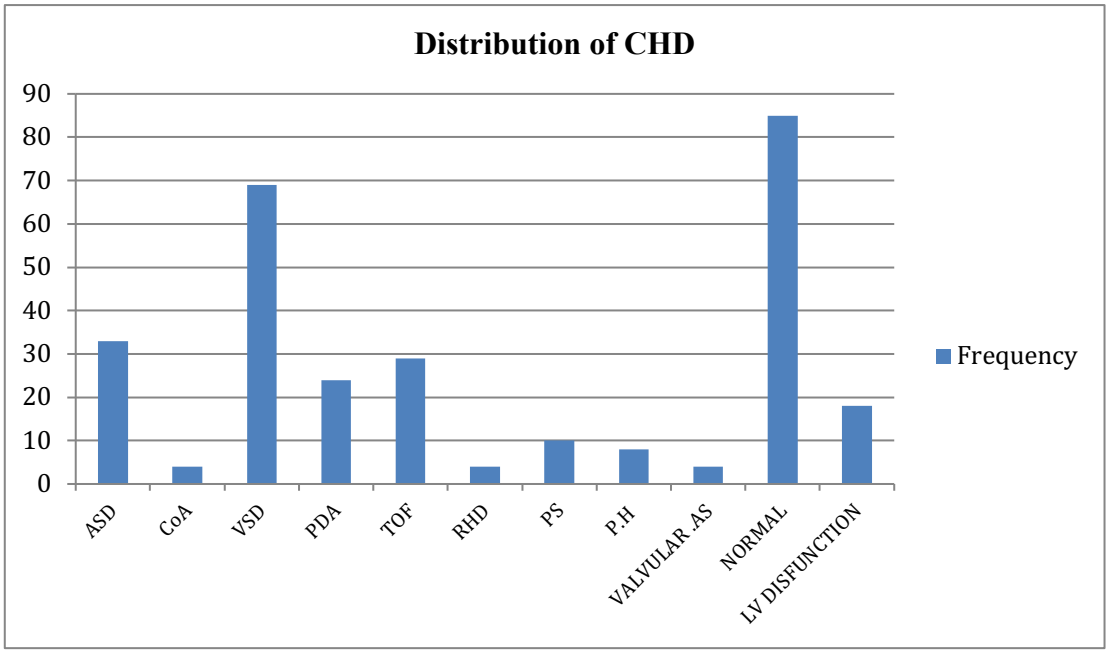


Figure 6

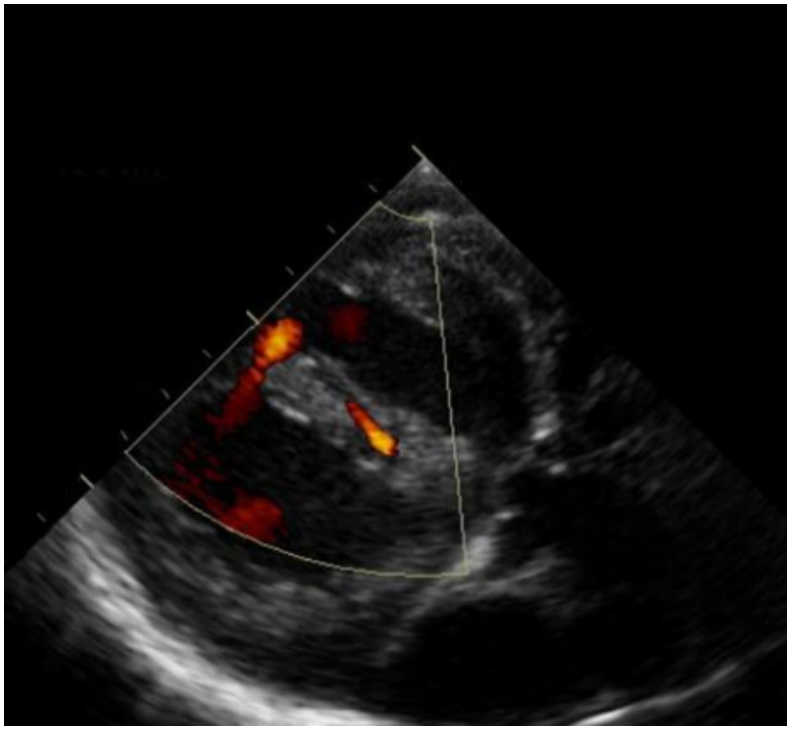
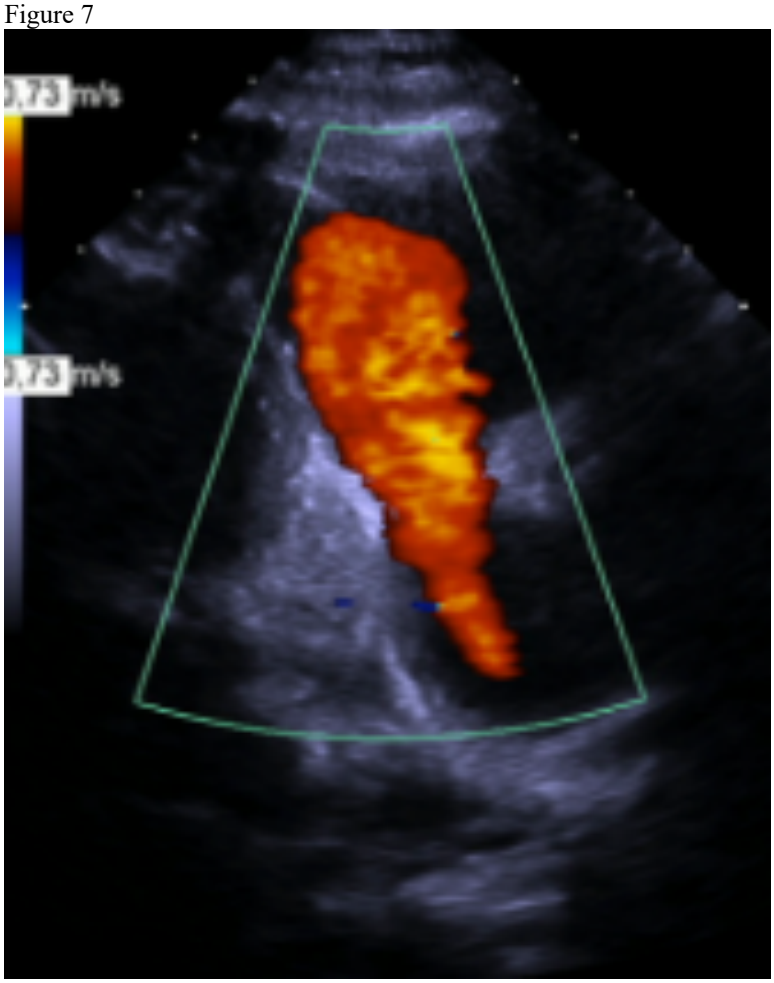


Figure 7



Discussion

CHDs are the most common congenital fetal malformations accounting of all congenital malformations and are responsible for a high rate of child mortality and morbidity. In this study, patients presented with the most common clinical presentation of a congenital heart defect in children from 3 months to 16 years of age referred to echocardiography were included.

In my study, 288 patients of clinically suspected CHD referred to echocardiography were studied. CHD is more common in men than women as in my study, it was clearly demonstrated that male patients outnumbering the female. Congenital heart defects were diagnosed more commonly between 3 months to 5 Years (72.22%) than other age groups. The reason for the higher incidence in the age group of 3 months to 5 years maybe that CHD becomes symptomatic at that age group.

The commonest congenital heart defects with a single lesion in our study were Ventricular septal defect 23.95% followed by Atrial septal defect 11.5%, Tetralogy of Fallot 10.1%, Patent ductus arteriosus 8.33%. Mahapatra A *et al. (2017*) this study was very similar to study conducted by Mahapatra. They conducted a retrospective hospital-based study of 231 patients over a period of 20 months. Where all suspected children less than 14 years of CHD were subjected to Echocardiographic study. The age, sex, clinical presentation and echo findings were well documented. The male to female ratio was found 1.2:1. The most common CHD was diagnosed in 1 month to 1 Year (40.25%). Ventricular septal defect (36.3%) Tetralogy of Fallot (11.25%) was the commonest type of a CHD. The major clinical presentation was a detection of a respiratory distress (84.8%) followed by tachycardia (41.5%) and Tachypnea (36.3%).

Manjuleswari N, *et al*. (2016) work on 3853 patients in the pediatric ward in which 60 were diagnosed. Peak incidence was seen in the age group of 1-12 months, comprising of 46.67% of the total number of cases. Males' patients were 53.49% and females 46.51%. The commonest CHD was Ventricular septal defect (58.14%) and TOF (35.29%). The result of my study was the same as Manjuleswaristudy. Among 75 patient's major ratio observed in 0.16_1 Year (29.3%). Male ratio 42(56%) predominate over female 33(44%). Ventricular septal defect (36.3%) and Tetralogy of Fallot (11.25%) were commonest congenital heart diseases.

Pathak .D, (2016) work on Incidence and Pattern of Congenital Heart Disease children of 82 confirmed patients between the ages group 1 month to 12 years. Pediatrics of CHD were suspected with a cardiac murmur, presence of cyanosis, feeding difficulties, cyanosis associated with feeding difficulties, clubbing, features of congestive cardiac failure, or failure to thrive. The final was confirmed by Echocardiography. These findings are consistent with my study results that major clinical finding observed was detection of respiratory distress (82%), tachypnea (78.7%), sweating & interrupted feeding (68%), chest pain (57%), cyanosis (26.7%).

Clinical presentation, according to the age of children, shows that asymptomatic patients mostly present in 2-5 years of age. At 0.16-2 year of age child presents with murmur followed by sweating &interrupted feeding, respiratory distress, syncope and Tachypnea. While in 2-5 years of age, they present with a murmur, syncope, respiratory distress, chest pain, and Tachypnea. These were common clinical presentations up to 5 years of age. The commonest clinical presentation above 5 years child was chest pain, respiratory distress, Tachypnea and syncope, and less common one's clinical presentations were our cyanosis, spell and fits. This study added theses age-wise distribution of clinical presentation, which was not present in all these previous studies.

Conclusion

Symptomatic patients mostly present in 3 months -5 years of age. At 0.16-5 year of age child presented with sweating, respiratory distress, syncope and tachypnea. While from 5-16 years, commonest symptoms were murmur, chest pain, respiratory distress, tachypnea. The most symptomatic lesion Congenital heart defects were Ventricle septal defect and Teratology of Fallot Ventricle septal defect, Atrial septal defect Pulmonary stenosis. Transthoracic echocardiography is an important tool for confirmation of clinical presentations of CHD at different age groups.

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Sonographic Determination of Common Breast Pathologies in Married Women

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Abstract
Background: In women, breast masses are getting progressively increasing across the board because of their mortality. Women are at high hazard in view of breast sicknesses, all the more ordinarily in instances of breast malignant growth. In numerous places of the world, breast carcinoma characterizes top in dangerous tumors affecting ladies with breast malignancy rates going from 1 to 8. By 2020, 70% of the 15 million new yearly malignancy injured individuals will be in creating nations. In the evaluation of clinically prevailing breast masses, ultrasound is a relatively moderate and effectively accessible symptomatic methodology that can be utilized clinically. The point of this exploration is to discover the accuracy of ultrasound in the determination of prevailing breast masses. Objective(s): To determine common breast pathologies with ultrasound in married women. Methodology: Ultrasound was done by using GE LOGIQ V5 and GE V SCAN with transducer (7-13) MHz in Radiology Department of Shaikh Zayed Hospital, Lahore. From October 2018 to September 2019, 138 patients were collected through convenient sampling with the request of breast ultrasound. Statistical software (SPSS version 22.0) is used for the analysis of data. Results: This study was done by using Ultrasound with 7-13 MHz of transducer. Data of total 138 patients were recorded for this study. Ultrasound was performed and the findings were analyzed. Out of 138 patients, The Ultrasonographic findings and frequency came out to be: Calcific foci 1, Cystic lesion 2, Hypoechoic nodules 1, Abscesses 1, Calcific foci 2, Calcific foci with lymph node 1, Cyst with ductal ectasia 1, Cystic lesion 29, Cystic lesion & calcific foci 1, Cystic lesion with ductal ectasia 4, Cystic lesion with intramammary lymph node 1, Cystic lesion with left axillary lymph node 1, Cystic lesion with right axillary lymph node 2, Cystic lesion with right axillary lymph node 2, Ductal ectasia 10, Ductal ectasia cystic lesion with left axillary lymph node 1, Ductal ectasia hypo echoic nodules cystic lesion with left axillary lymph node 1, Ductal ectasia with left axillary lymph nodes 1, Ductal ectasia with right axillary lymph node 2, Echogenic nodule 5, Fibro adenoma 5, Fibro adenoma with intramammary lymph node 1, Hypo echoic nodules 11, Hypo echoic nodules with ductal ectasia 1, Hypo echoic nodules with right axillary lymph node 1, Left axillary lymph node 6, Lymph nodes 2, Macro calcifications 1, Macro calcifications with hypo echoic nodule 1, Right axillary lymph node 11, Right Intra-mammary lymph node 1, Solid lesion 27, Solid lesion with micro calcifications 1. Out of 138, only 3 women were breast feeders. According to this study, 57 patients had left-sided breast pathologies, and 81 had right-sided breast pathologies. Conclusion: Palpable breast masses could easily be characterized and localized with the help of a relatively inexpensive and a more accessible ultrasound modality. It should be the first-line investigation in women of all ages.

Keywords: Ultrasonography, Breast Lesions, Breast Pathologies, Palpable Masses, Malignant Lesions

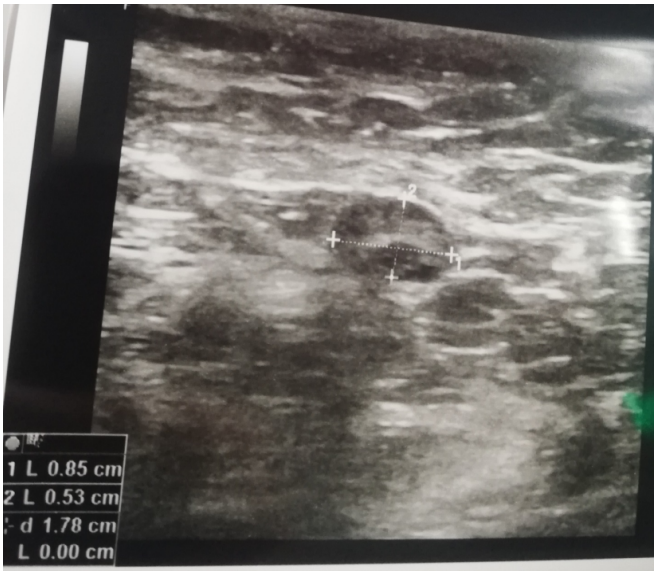
Introduction

Breast disorders are a diverse group of illnesses leading to life-threatening cancers encountered commonly in the general population worldwide. (Rasheed et al., 2014) These escalating ubiquities of breast diseases lead to community consciousness to lower the stigma of breast cancer through education (Parkin et al., 2005). The primary cause of breast disorders in females is benign breast diseases that are non-cancerous and not life-threatening, commonly affecting women of reproductive age group however they may be bothersome or uncomfortable for some women associated with symptoms (Hatim et al., 2017). Benign breast diseases include pathologic changes in which the risk for developing breast cancer does not increase with the exception of lesions which are further divided into proliferative breast lesions without atypia and proliferative breast lesions with atypia that may confer a slight increase in risk (Ongore et al., 2013). Nonmalignant conditions like breast abscess, benign tumors, trauma, mastalgia, mastitis, nipple discharge, and fibrocystic changes may account for benign breast diseases that are prevailing worldwide (Chalya et al., 2016). Benign breast diseases are not only confined to fibro adenomas, fibrocystic diseases, cysts and ductal perforations with or without atypia. Some studies have shown 4-5 fold increased risk of developing breast cancer demonstrating benign breast diseases with atypia and 1.5-2 fold increased risk in patients without atypia (Silvera et al., 2008). Morphologically, from normal terminal ductal lobule to precancerous condition of breast and cancer which is spread and cancer which is not spread has been well described, however, the main genesis of benign breast disease is still undetermined (Wellings et al., 1975). There are certain factors that may contribute in development of benign lesions including, environmental and genetic predisposition element like diet, physical activity and alcohol (Berryhill et al., 2012). Although benign breast diseases are not life threatening still they are known to be a great reason for occurrence of cancer of breast (Dyrstad et al., 2015). According to some studies high risk of breast cancer is due to the history of family (Zhou et al., 2011). The general symptoms linked with cancer of breast may include pain, palpable mass, breast lumps however other clinical features may also be encountered including nipple discharge, nipple deformity, retraction and other skin changes (Chalya et al., 2016). Breast masses are named either threatening tumors or benevolent developments and masses (Devolli-Disha et al., 2009). Malignant breast lesions are of great concern because in women, breast cancer is the popular pathology, however, than malignant one benign breast lesions are quite a lot (Caleffi et al., 2004). Fibroadenoma could be a kind of noncancerous breast lump. It contains of each stromal and animal tissue parts (Rangaswamy and Rubby, 2016). When put next to healthy people among constant age teams, fibro adenoma as a non-cancerous breast mass has been considered to increase the chance of carcinoma (Prasad and Houserkova, 2007b). Fibro adenoma is associate estrogen-induced neoplasm that forms in teenage years. It is the third commonest breast lesion when fibrocystic sickness and malignant neoplastic disease (Valea and Katz, 2007). Breast fibro adenoma (FA) is a nonmalignant tumor, most often diagnose during self-examination or clinical breast examination(Larsen et al., 2003). It happens in 25% of symptomless girls (El-Wakeel and Umpleby, 2003). It's sometimes a sickness of early fruitful life; the high rate is between the era of 15 and 35 years. Conventionally considered a neoplasm of the breast, fibroadenoma is additionally thought to describe a collection of hyperplastic breast lobules known as “aberrations of traditional development and involution” (El-Wakeel and Umpleby, 2003). Fibroadenoma originates from the particular stroma of the lobe. About 50% of fibroadenomas contain different numbers of breast changes comparable to duct epithelial hyperplasia, sclerosing glandular disease and adenosis. Complicated fibroadenomas is that which contain these parts. Simple fibroadenomas don’t seem to be related to any accrued risk for resulting carcinoma. However, ladies with complicated fibroadenomas could have a rather increase risk for resulting cancer (Carter et al., 2001). The presence of atypia (either ductal or lobular) restricted to a adenoma doesn't cause a larger risk for long breast malignant neoplastic disease than with fibroadenomas generally (Carter et al., 2001). Ultrasonography plays a main role in finding of breast pathologies with respect to the shape, contour, echo texture, echogenicity and encompassing tissue of the tumors, cysts and abscesses that square measure higher differentiate from nonmalignant tumor by ultrasound imaging; however, overlapping findings in non-solid fibroadenomas at the facet of occasional calcification and non-circumscribed margins may mimic the findings in many alternative forms of breast masses (Prasad and Houserkova, 2007a).

Image 1: Sonographic Image of 65 years old Basheeran bibi showing irregular hypoechoic malignant lesion measuring 16*14 mm in axillary tail.

Image 2: Sonographic image of 47 years old Miss Saima showing lesion with homogenous echotexture measuring 17.3*12.6 mm in Right Breast.

Image 3: Sonographic image of 29 years old Miss Zunaira showing lymph nodes in axilla measuring 8.5*5.3mm in the left breast.



Results

138 patients in total with mean age 38.62 ± 13.07 years were included in the study. Out of 138 patients, The Ultrasonographic findings in the form of its frequency and percentage are given in table 1. Out of 138, only 3 women were breast feeders. According to this study, 57 (41.3) patients had left-sided breast pathologies and 81(58.7) had right sided breast pathologies. Right side was more involved in breast masses as compared to left; right to left ration is 57(41.30%) to 81(58.70%).

Table 1: Ultrasound findings in the patients of palpable breast masses

Ultrasound Findings	Frequency	Percent
Calcific foci	1	0.7
Cystic lesion	2	1.4
Hypoechoic nodules	1	0.7
Abscesses	1	0.7
Calcific foci	2	1.4
Calcific foci with right axillary lymph node	1	0.7
Cyst with ductal ectasia	1	0.7
Cystic lesion	29	20.7
Cystic lesion & calcific foci	1	0.7
Cystic lesion with ductal ectasia	4	2.9
Cystic lesion with intramammary lymph node	1	0.7
Cystic lesion with left axillary lymph node	1	0.7
Cystic lesion with right axillary lymph node	2	1.4
Cystic lesion with right axillary lymph node	2	1.4
Ductal ectasia	10	7.1
Ductal ectasia cystic lesion with left axillary lymph node	1	0.7
Ductal ectasia hypoechoic nodules cystic lesion with left axillary lymph node	1	0.7
Ductal ectasia with left axillary lymph nodes	1	0.7
Ductal ectasia with right axillary lymph node	2	1.4
Echogenic nodule	5	3.6
Fibroadenoma	5	3.6
Fibroadenoma with intramammary lymph node	1	0.7
Hypoechoic nodules	11	7.9
Hypoechoic nodules with ductal ectasia	1	0.7
Hypoechoic nodules with right axillary lymph node	1	0.7
Left axillary lymph node	6	4.3
Lymph nodes	2	1.4
Macro calcifications	1	0.7
Macro calcifications with hypoechoic nodule.	1	0.7
Right axillary lymph node	11	7.9
Right Intramammary lymph node	1	0.7
Solid lesion	27	19.3
Solid lesion with micro calcifications	1	0.7
Total	138	100.0

Discussion

Breast ultrasound has gained overall importance as a tool for the diagnosis of breast diseases in women. It would be more convenient the correlation of ultrasonography findings with the corresponding histopathological features. This study was done by using Ultrasound with 7-13 MHz of transducer. Data of 138 patients were recorded in this study. Ultrasound was done, and the findings were analyzed. Out of 138 patients, The Ultrasonographic findings and frequency came out to be: respectively, Calcific foci 1, Cystic lesion 2, Hypoechoic nodules 1, Abscesses 1, Calcific foci 2, Calcific foci with right axillary lymph node 1, Cyst with ductal ectasia 1, Cystic lesion 29, Cystic lesion & calcific foci 1, Cystic lesion with ductal ectasia 4, Cystic lesion with intramammary lymph node 1, Cystic lesion with left axillary lymph node1, Cystic lesion with right

axillary lymph node 2, Cystic lesion with right axillary lymph node 2, Ductal ectasia 10, Ductal ectasia cystic lesion with left axillary lymph node 1, Ductal ectasia hypoechoic nodules cystic lesion with left axillary lymph node 1, Ductal ectasia with left axillary lymph nodes 1, Ductal ectasia with right axillary lymph node 2, Echogenic nodule 5, Fibroadenoma 5, Fibroadenoma with intramammary lymph node 1, Hypoechoic nodules 11, Hypoechoic nodules with ductal ectasia 1, Hypoechoic nodules with right axillary lymph node 1, Left axillary lymph node 6, Lymph nodes 2, Macro calcifications 1, Macro calcifications with hypoechoic nodule 1, Right axillary lymph node 11, Right Intra-mammary lymph node 1, Solid lesion 27, Solid lesion with micro calcifications 1. Out of 138, only 3 women were breast feeders. According to this study, 57 patients had left sided breast pathologies and 81 had right-sided breast pathologies. Different investigations proclaimed that these ultrasound highlights, for example, oval or round shape, upgrade or nonappearance of back acoustic highlights, parallel direction, encompassed edges, sudden interface, nonattendance of encompassing tissue modifications spoke to a kindhearted bosom injury, while, unpredictable shape, echogenic corona, back acoustic shadowing and variations from the norm of the encompassing tissue paying little respect to resound design were viewed as steady with a harmful sore. It is also true that not all carcinomas fulfill these criteria and some do only partially. We then compared the ultrasound results findings with other studies. As compared to the study done by Havin A, ninety three participants (52.5%) had cyclical breast pain while 84 participants (47.5%) had non-cyclical breast pain. The pain was on the right side in 32.8% of participants, in left side in 36.7% and bilateral in 30.5%. The pain was mild in 58.2% of participants, moderate in 30.5% and severe in 11.3%. The ultrasonic assessment of the affected breast classified the participants into 4 categories; normal (29.9%), tubular (18.6%), ductasia (18.6%) and mass (32.8%). Among the 58 participants having mass in the breast, 48.3% had cystic mass and 51.7% had solid mass. The mass was on the right side in 36.2%, in left side in 29.3% and bilateral in 34.5%. The ultrasonic features of the mass showed that 86.2% of cases were benign and 13.8% were intermediate.

Conclusion

Pulpable breast masses could easily be characterized and localize with the help of inexpensive and a more accessible ultrasound modality. It should be the first line investigation in women of all age.

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Antisocial Personality Disorder

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Abstract
Motivation: Personality disorders are patterns from areas like cognitive, emotional, impulse-control and relationships with others; they are constant and lasting over time, non-functional, disturbed, which do not allow normal functioning in daily life. Personality disorders do not fit into the classic pattern of illness. They do not have a limited onset of time, a period of disease and then a cure following a treatment. Purpose: The paper presents a 46-year-old patient with frequent admission to psychiatry for an antisocial personality disorder, which presents a decompensation of psychotic intensity. Methods: admission to a psychiatric clinic, psychiatric evaluation, treatment with Rispen, Romparkin, Depakine, Levomepromazine, Anxiar, Diazepam, life situation management, social inquiry, psychological evaluation, presentation of psychotic phenomenology. Results: The present paper presents a patient with indices of cerebral micro-organicity, with poor school performance, with class repetitions and school dropout, subsequently developing behavioral disorders that have been structured into an antisocial personality disorder. The patient presented multiple acts of violence, conflicts with the law, about 14 criminal cases in progress, violence into the family and outside the family. Conclusions: There were both short-term hospitalizations for crisis management and long-term hospitalizations, which did not have a beneficial effect. The paper aims to expose the theoretical perspective on the pathology of antisocial personality disorder, with particularities for this case.

Keywords: Antisocial Personality Disorder, Psychotic Decompensation, Heteroaggressive Potential, Dangerousness, Psychodynamic Functioning

1. Introduction

1.1. Short presentation of the case

A 46-year-old patient with a psychiatric background comes with the ambulance to the emergency room; the ambulance was requested by the patient, for delusional ideas of transparency of thought and insertion of the follow-up thoughts with auditory, commentary hallucinations and insulting psychotic anxiety; conscience of the disease is absent. The symptomatology started suddenly a few days ago, according to the patient's statements. The patient accepts the hospitalization and signs the informed consent: "I was talking in my mind, someone was answering me, he heard me" "It is possible that I had a microchip in my head when I had lipoma surgery." Regarding his collateral hereditary antecedents, we noticed that his father had a stroke. From physiological,

pathological personal history: behavioral disorders in childhood; early school dropout; deficiencies in knowledge acquisition; cranial brain trauma at age 40 with loss of consciousness. He has been under surgery 3 weeks ago on the parieto-frontal-excision level.

In what concerns his living and working conditions: he is legally employed at a service company, following a few periods of abandonment of the job or its absence. He lives alone. He is unmarried, without children. He studied 10 classes + professional school + qualification courses as security guard, then he has been a waiter.

Regarding his additive behaviors, he claims a chronic ethanol consumption 2-3 doses of 330ml / day.

Background medication administered before hospitalization: Non-compliant to treatment: "For one year I do not take treatment."

1.2 History of the disease

2019 - The 46-year-old patient with a psychiatric history comes to the hospital by himself for delirious symptomatology amidst a therapeutic negligence and potentiated by ethanol consumption.

History in the clinic where he is currently admitted: He physically assaulted a nurse in a previous hospitalization, claiming that he confused the person.

Criminal record: He served 1.8 years in a prison for theft and outrage against moral behavior: "They gave me something to drink while I was in the bathroom." The facts took place between 1997-2005. 14 criminal files opened for physical violence "I was not guilty."

2018 - The patient, aged 45, known with multiple hospitalizations in psychiatry for a behavioral pathology suggesting a behavioral disorder, with indices since adolescence in this respect, difficult schooling and conflicts with the law, is currently returning to the ward. the guard due to a pathology of mental and behavioral disorders due to alcohol consumption, at present the profile of an organic personality disorder is highlighted. Specialized treatment is established under which the evolution is favorable. It is externally improved.

Earlier in 2018- Patient with a psychiatric history, relatively recently discharged from the psychiatric service, is brought to the police and ambulance ward in acute ethanol poisoning for a behavioral syndrome with physical and verbal heteroaggressivity, irritability, low frustration tolerance, impulsivity. After remission of ethanol intoxication, the patient is quietly psychomotor, compliant to treatment, and cooperative. Later he begins to sketch a delusional idea of persecution with modified psychotic behavior and possible elements of auditory, neurosensory productivity.

In the summer of 2018 - The patient, aged 45, known with multiple hospitalizations in Psychiatry for a behavioral pathology suggesting a behavior disorder (indices since adolescence in this respect, difficult schooling, conflicts with the law), is currently returning to the emergency room due to a mental disorder and behavioral disorder due to alcohol consumption. Specialized treatment is established under which the evolution is favorable.

In Spring of 2018, second hospitalization – patient known as an abusive consumer of alcohol, diagnosed with Mixed Personality Disorder, discharged from the psychiatric clinic on 17.07.2017 from a Drug Addicts Clinic, returns to the hospital brought by the ambulance and the police for a behavioral syndrome, accompanying of destruction and threats to the block neighbors and the police after acute ethanol consumption. An alcohol proof and anxiolytic treatment are established. It is outsourced upon request, contrary to the medical opinion.

In Spring of 2018, first hospitalization - A patient aged 45 years, known with a psychiatric history, with numerous hospitalizations in psychiatry, a chronic ethanol user, is brought to the emergency room at his request for: psycho-motor anxiety, psychotic intensity anxiety, irritability, marked affective lability, bizarre behavior, unusual outward appearance, symptoms accentuated by the abuse of ethanol.

2017- second hospitalization - Patient known with psychiatry problems, recently discharged from the Clinic of Addictions, returns to the hospital brought by the police for a violent behavioral syndrome with threat, visual violence against the neighbors and destruction caused by alcohol consumption during the active day.

2017- first hospitalization - The patient, known with mixed type personality disorder, predominantly impulsive explosive, with intermittent expressions potentiated by alcohol consumption, presented multiple hospitalizations in psychiatry, most being voluntary and lasting between 7-10 days, from those several times being brought into acute ethanol intoxication and after committing aggressive acts, behavioral and violent pathology. Currently comes in the same situation - acute ethanol intoxication, behavioral pathology to a neighbor: "I knocked on the door to a neighbor. I wanted what every man wants," "I heard voices in my head two years ago, they said obscenities, sexual stupidities, I can't tell them." The police requesting non-voluntary hospitalization due to several criminal files opened for committing type acts: assaulting a neighbor, breaking the door, threatening, etc. From the mother's statements, the patient would still have since childhood indices of cerebral organicity (learning with difficulty, poor school results, impulsive manifestations).

2016- second hospitalization - A 43-year-old patient, known with a psychiatric background, is brought by the Police for the following symptoms: psychomotor agitation, verbal and behavioral heterogeneity and in the context of acute ethanol poisoning.

2016- first hospitalization - A 43-year-old patient, known with a psychiatric history, recently discharged from the hospital, is admitted for psychomotor agitation, irritability, physical and verbal heteroaggressivity, threatening behavior, symptoms that have emerged in the context of acute ethanol poisoning.

2. Materials and methods

Remarks: Patient in hospital outfit, relatively well-taken care of, with hygiene maintained, conscious, cooperative, psycho-motorized, quiet, temporally oriented, auto and allo-psychic. Mimicry and gesture hypomobile, fixed gaze, inappropriate laughter, empathetic (Shaw, 2012).

Perception: Irritability, commentary auditory hallucinations (Black, 2015).

Attention: Spontaneous and voluntary hypoprosexia, concentration difficulties. Stability and selectivity of attention (Werner, 2015).

Memory: Fixing hypomnesia, lacuna amnesia, delusional integrated pseudo-reminiscence and confabulations (American Psychiatric Association, 2013).

Thought: Slightly inconsistent speech, with the weakening of free associations, thinking is slightly disorganized, tangential, circumstantial responses (Barnes, 2013).

Delirious idea of persecution, injury and prosecution, summary and relationship: "They have cameras put at my house and on the TV you can have video cameras, microphones, they implanted a chip in my forehead."

Delirious ideas of grand-mania: "I have this chip in me because I know too much, but I can't tell you what I know because it's secret" (Burt, 2014).

Intrusive thoughts and transparency of thoughts: "I have the impression that you all hear my thoughts and try to change them."

Behavior: Physical heteroaggression marked by multiple criminal records for acts of violence. Explosive potential, impulsivity, unpredictability, danger.

Paraclinical examination: anterior EEG: indices of cerebral organics.

Positive diagnosis
- main: Psychotic decompensated antisocial personality disorder
-secondary: chronic alcoholism

3. Results

The treatment the medical staff decided for this patient to follow is: Risperidone 4 mg tb 1 + 0 + 1; Trihexifenifil tb 1 + 0 + 1; Valproic acid 500 mg tb 1 + 1 + 1; Levomepromazine 25 mg tb 1 + 0 + 1; Lorazepam 1 mg tb 1 + 1 + 0; Diazepam 10 mg 0 + 0 + 1

3.1. Differential diagnoses for psychiatric illness

1. Schizoaffective disorder - Manic episode
The antisocial emphasis and self-confidence mimic anger, through countertransference. The presence of possible auditory hallucinations "I was talking in my mind, someone was answering me, he heard me" "I heard two years ago voices that insulted me." Great delusional ideas "I have this chip in me because I know too much, but I can't tell you what because it is a dissertation" -> Decompensation prevalent delirium (Dolan, 2002).

2. Organic personality disorder
Possible behavioral disorders in childhood (possible diagnosis of ADHD), the presence at the EEG of some indications of organicity and traumatic brain injury in the past support a possible diagnosis of an organic disorder. Psychological examination supports low IQ (Ficks, 2014).

3.2. Evolution and prognosis

The antisocial personality disorder has a chronic evolution but may fade or remit as the individual ages. Given the fact that the patient is 46 years old and requires frequent psychiatric hospitalization, his evolution is not headed for improvement or remission.

Antisocial personality is associated with the risk of anxiety disorders, substance abuse, somatization, or may have psychotic decompensation as in the present case, these being potentiated by alcohol abuse (Jorev, 2014).

Positive prognostic factors:
- the good response to treatment in the past
- absence of a family history of psychiatric disorders

Negative prognostic factors:
- poor compliance with treatment
- multiple relapses
- chronic alcohol consumption (Bandelow, 2015)

4. Discussion

The act and the passage to the act are important topics both in criminology and in the psychology of criminology. One of the main basic characteristics of the act is that the individual who performs it can be held responsible for it. There are two types of acceptances for the term "responsibility:" a psychoanalytic responsibility and a legal responsibility (Kernberg, 2004). The concept of responsibility is directly related to intentionality, which is a complicated concept in psychoanalysis, as it has found that, besides its conscious plans, the subject also has unconscious intentions and impulses. Therefore, one can very well commit an act after which it is asserted to be unintentional, and analysts can reveal it as the expression of an unconscious desire. Freud calls these acts parapraxis or missed acts (Verhulst, 2015). However, they are acts that are missed only from the point of view of the conscious action, because they are successful in expressing the unconscious desire that determines them. While in the legal field (of legal responsibility) a subject cannot be found guilty of murder (for example), unless it can be proved that the act was intentional, in the psychoanalytic treatment the subject is

confronted with the ethical duty of assuming responsibility, even and in the case of unconscious desires expressed in his actions. He must recognize even seemingly accidental actions as real acts expressing an intention, even if it is of an unconscious nature, and assume that intention. This, however, is an ethical problem that arises only in the case of in-depth analysis of this type of pathology. In reality, the psychopathic individual rarely wants to understand the motivation of his structural defect (Latvala, 2015).

The pattern of psychopathy popularized in North America through the work of Harvey Cleckley had a strong influence. Cleckley identifies the characteristics of the psychopath as follows: "superficial charm and good intelligence, the absence of illusions and other signs of irrational thinking; absence of nervousness and psycho-neurotic manifestations; lack of trust; lack of sincerity and truthfulness; lack of remorse or shame; inadequately motivated antisocial behaviors; poor judgment and failure to learn from previous experience, pathological egocentricity and inability to love, general deficiency in major affective relationships; lack of sensitivity in general interpersonal relationships; eccentric and unattractive behavior, with or without alcohol use; suicide attempt rarely completed; impersonal, trivial, with a poorly integrated sex life; failure to follow a life plan" (Cleckley, 2015).

The specialty literature and the research conducted on the psychopathic individual report changes in the amygdala function in particular, which are evidenced by the neurocognitive sciences.

Dysfunction of the tonsil is a central point of the pathology associated with psychopathy. The amygdala is a neural formation consisting of a mass of gray matter found in man in the anterior portion of the temporal lobe (McWilliams, 2014). The amygdala has a direct connection with the manifestation of basic emotional reactions and the formation of behavioral responses to associations of stimuli of the conditioned stimulus type - unconditioned stimulus and conditioned stimulus - reinforcement stimulus. The amygdala influences the level of jerking reflux by stimulating the basal threatening subcortical circuits, as a result of activation through conditioned stimuli. In addition, the amygdala allows conditioned stimuli to elicit unconditional responses. Or, the defects of these functions are powerful indicators of a level of psychopathology in the affected persons (Meloy, 1988).

Among the implications of tonsil dysfunction are the disturbance of moral socialization. In individuals with this dysfunction, the sensitivity is reduced to the emotional representations of the others, their own representations being insufficient to affect the moral issues affective. His affective insensitivity, manifested by the inability to live affectionately threatening a danger, as well as by the lack of empathy, increases the degree of exposure to danger first and foremost of the person, but also of those around him. Various studies over time have shown that in the biophysiological plane, "the noradrenergic (inhibitory) response to stress / threat stimuli can be disrupted in individuals with psychopathy." Other studies have shown that, in antisocial persons, a lower volume of gray matter appears in the prefrontal orbital-frontal area compared to normal individuals, which may be the explanation for the reduced excitability of this cortical area (Shi, 2012).

This anatomic-physiological basis represents the foundation on which in the behavioral plane the affected persons develop as coping mechanisms manifestations such as: duplicity morality, the premeditation of antisocial acts, and the easy acquisition of aggressive existential patterns throughout the development of the personality. One of the main behavioral characteristics of psychopathy is dissimulation, which translates into a voluntary action, premeditated on the basis of a secondary interest, which aims to obtain certain benefits (Van den Bos, 2014). Related to social adaptation and integration, psychopathy is a malignant disorder that expresses the conflict between the instinctive emotional life and the social norm in its raw form, through direct, non-secondary expression. Essentially, psychopathy is a disorder of affectivity, affecting the mechanisms of self-appreciation and conscious control of one's manifestations, denying the value of social norms and moral-social feelings. The discrepancy between the conserved cognition functions and the altered affective causes the antisocial (psychopathic) individual to seek satisfaction in aberrant acts, of which the malignancy is conscious. The danger of the psychopathic aberrant behavior is the result of the subjective position of the premeditated acts, the affective duplicity, the increased receptivity to the negative psychological inductions, the total indifference to the feelings of others and the incapacity of loyalty.

Other features associated with psychopathy are: incapacity and impossibility of achievement, intolerance to frustration, inadequacy and permanent dissatisfaction leading to social nihilism, inhibition of the ability to contract and maintain stable interpersonal relationships, experienced as a restriction of instinctive freedom (Paris, 2013).

The perverse activities that involve manifest cruelty towards others are frequently present in patients with antisocial personality disorder. Stoller called perversion the erotic form of hatred. The association of the perversions with the antisocial personality disorder makes the individual almost impossible to recover by his own will, since he does not develop symptoms that consciously lead him to regret the facts committed. The evolution of pathology leads to more serious forms of destruction, such as psychosis, dementia and in extreme cases, suicide, as a form of manipulation of others (Reichborn-Kjennereud, 2015).

Although in the specialty literature around the world, the terms "psychopath" and "sociopath" are used either alternatively or as synonyms, lacking a precise conceptual delimitation, the term sociopath was introduced to emphasize the importance of environmental factors between the causes of delinquent behavior. Psychopathy is the result of an imbalance of the person's personality, which leads to the outline of a disharmonious characteristic structure that manifests itself through associative and / or antisocial behavior, representing a structural defect characterized by: the dominance of the instinctive sphere and weak pulsional control, manifested by deviant or delinquent behaviors; disorders of the sphere of affectivity (emotional deficiency and the inability to resonate emotionally); disorders of the volitional sphere; characteristic disharmony and dissocial behavior, which make it difficult or even impossible to adapt the individual to socially accepted environmental conditions.

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From Sexting to Child Pornography

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Abstract
Motivation: Psychological expertise is the test stone before the Court, when hidden motives determine behaviors and actions whose consequences result in criminal acts. Child pornography is a topical topic, such as "sex on the phone" and sexting, with frequent pathology. Hypothesis: The clients presented in this paper, accused of child pornography, are pushed to there actions by a conglomerate of socio-cultural reasons that define them. Objective: To highlight the context and personality structure of the person concerned, to demonstrate the absence of features in the spectrum of any personality disorder and to underline the propensity of young people towards the area of impulsive satisfaction in the online environment. Material and methods: structured interviews with the client, study of legal documents, appeal to specialized literature, issuing opinions on materials considered pornographic, applying deductive hypothetical reasoning to the client's life situation and situation. Results: Communication in the virtual environment facilitates rapid regression and access to the nucleus of personality, as well as to the impulsive reservoir, so that more and more young people have early access to erotic pleasures and easily transcend prohibition and barriers, in the Super-Ego line operating at reduced dynamics. Also, the socio-cultural climate stressed by the absence of boundaries made possible the relationship of the two, as well as the emotional involvement of both. Conclusions: The society imposes fine nuances and different boundaries when it comes to committing criminal acts, the personality structures of those involved, along with the dynamics of micro-groups and that of the society itself, which dictates the limits.

Keywords: Child Pornography, Pollution, Sexting, the Emotional Climate of Micro-Groups, Boundary Crossing

1. Introduction

Arguments of Judicial Psychology that justify the evaluation and issue of some ethiopathological assumptions of the current psychopathological manifestations of the clients, by direct reference to the socio-cultural and ethnic environment, as well as to the microclimate of the group of which they belong and to the relational dynamics specific to a community of people, where they have an invested social image, as well as financial power:

- The individual cannot be judged in the absence of the culture of which he is a part, the client's ideation and will being directly related to the education received and the habits of the group of friends, the one in question having to be judged with the same moral standards and under the same conditions. As the others in the membership group;

- Each verbal or non-verbal message of the minor person (including the sent photos, the video clips, the communication in the register of an adolescent female flirt charged with eroticism), as well as of the other members of the entourage / community was a bearer of multiple information, some contradictory or painful, which led to the achievement of a purpose (even if the motivation was not conscious or aware). The girl failed to take into account the client's reaction, which was directly proportional to his sensual-erotic excitement;

- The analysis from the angle of the Judicial Psychology of the content of a gesture/attitude/ decision / (here entering and analyzing the communication in the sexting register shows intentions, motivations, emotional load and particular ideational content. Expressive behavior is the last one that generates profound reactions, within a relationship couple who develop in small communities, dominated by their own norms and principles.

2. Methods

The methods used are specific: anamnesis / clinical interview, case analysis, approach respecting the logic of the deductive argument, explanatory, demonstrative, including from the perspective of the psychodynamic accompaniment (also identified in the non-verbal expression and in the study of the acts and actions of the client after the moment emotional shock when confronted with what happened and the consequences of the facts and throughout the evaluation), including theoretical elements specific to the behavioral analysis. It is worth mentioning a number of five evaluative meetings for each case (multiple psychological tests applied, to highlight the personality structure prior to the psycho-traumatic situation, the level of intellectual and emotional development, as well as the absence of a symptomatic and syndromological complex). Also, the entire file of the clients was studied, with psychological expertise on documents and interpretations of concepts located on the border between the criminal area and the psychopathological area.

3. The hypotheses of psychological expertise

- The acts committed by the clients are in general, a phenomenon isolated in the life history of those concerned, these being produced on an immature adolescent background of the personality, a fund that was enhanced by the socio-economic and cultural microclimate of the environment in which those in the cause goes into existence.

- We emphasize the personality structure of the clients, which we expertly demonstrate to demonstrate the absence of personality traits in the addictive register, the phenomenon of sending messages and storing the photos to which the file refers being one limited to the partner in question and generated by a passion for the qualities its feminine. The chosen psychological tests meticulously investigate deep aspects of the personality, which would concern libidinal type fixations, pathological attachments or attachments to beings or objects, fantasy and reverie life, which will take over the subject to the detriment of a mature social functioning. The psychological expertise has been set out to demonstrate the absence of psychic functioning in this pattern.

- It was tried to exclude any vein of exhibitionist, anti-social and perverse type; the psychological tests were chosen to be of a projective type (so that the one in question cannot be presented in a more favorable or depreciating light), as well as a multi-phase personality inventory. , to highlight the pulsational complex of the subject, its characteristic structure, which excludes a pathology. In other words, the client does not belong to the category of character neurosis, does not fall into disharmony, personality disorders and we do not see a pathology of a perverse fixation type.

4. Description of the situations

Clients, around the age of 30, describe their socio-economic and material situation as being good, during the last six years of their life performing their activity in different jobs, which are their property or are depending on the decision, business that is successful supported by parents at various times. They spent most of their time working, gaining experience, dedicating themselves to clients, being non-conflictual, able to gather around friends and clients, describing the workplace and life with joviality, warmth and passion. One of the clients has a gaming room and sports betting administration, which he deals with, pointing out that, in any kind of control, there have never been any irregularities in his professional activity. Despite the temptations that could lead to a possible addition of mechanical games or sports betting, the one in question was never inclined in this area,

being bought, considering their income and using them for reinvestment. Also, the client consumes alcohol only occasionally, during the parties, with no suspicion of any dependence on alcohol, substances, or gambling.

Most clients say they are afraid of the possible envy they might have aroused about their warm, open, jovial and welcoming nature, non-conflictual, and with their ability to connect friends between people from different socio-economic backgrounds. Most have ideas for business development or professional promotion.

They all come from harmonious families, the parents being made alive, respecting the work and the people they work with. Most consider their father a role model and consider that he owes them for how he formed them. Also, the mother is with them, being emotionally affected by the situation that their son is going through but supporting him both emotionally and concretely in the work within the bar.

Those in question describe the cultural microclimate of the place where they live as follows:
Most of the young men live in rich localities, with young people, between 20 and 30 years, who deal with various businesses, hardworking people, many of them working abroad and later returning to reinvest the money earned in their native places. Thus, the clients belong to groups of six-sevenen young men, friends, who spent most of their time together, developing an atmosphere of masculine joviality and friendship, in which they recounted to each other their future prospects with the local girls.

It is worth mentioning that most young women either leave the country in search of a job, or go to study in Bucharest or in the neighboring localities, so that most of the young men were turning to younger girls, trying to find a partner from the same locality, with whom he has a friendship.

As for the relationships with girls, most of them had, in the past, at least a long-term friendship with a smaller partner. The relations were harmonious, with the agreement of the parents on both sides. In general, the separation occurred not because of the clients, but because the young people left the village. Subsequently, the client states that he tried a friendship with the daughter of the current mayor, a relationship that lasted a short time and ended because of the girl. He fears the possibility of the current mayor being upset, because the relationship between the client and his daughter was not a prospect, multiple stories from interviews highlighting the social-political context in which things are done at the commune level, the client offering a broader perspective on of the phenomenon and reporting a microclimate highlighted by the struggle for political power, financial power, "territorialization". Under these circumstances, the person in question is well seen from a financial point of view, capable of arousing envy and the desire of others to ruin their social image and accumulated welfare.

From this perspective, the client has a solid structure, passing relatively well through the legal situation he faced (the criminal case in this case), recognizing his mistakes, appealing to reason, trying to understand, to delimit the group and pressure group to engage in similar behaviors. It is worth mentioning that all the young men in the group were concerned about underage girls, as well as "sex on the phone" and the whole area of maintaining intimate relationships in the virtual environment (Reichborn-Kjennereud, 2015).

Modern specialized literature opens a whole chapter of erotic experiences in the virtual world, social networks itself being a way of attracting the libidinal impulses of young men towards satisfaction in this register. The communication in the virtual world between the client and the victim was made especially in the evening, when each of them was in his room, the ambience, the darkness, sometimes the musical background and the loneliness, making it easy to pass from the register of desires to reprehensible actions. It is worth mentioning in today's society the predilection of young people towards erotic behaviors satisfied on fantasy, imagery and reverie models, perhaps due to the pressure of time and, sometimes, the concrete lack of space in which to organize their meetings.

Clients describe that they nourished not only a physical attraction (this being physically and sexually mature) towards the girl in question, as well as real feelings, only that they, out of respect and desire not to force things, did not he had the courage to go on the facts in the reality register (he stated on several occasions that he did not make love to it, because they did not have the opportunity and he wanted to pass the time for the girl to grow and

to strengthen the friendship). They were eminently convinced that the partner nourished the same desires in the erotic area as himself, and even though some conversations may be considered vulgar, at that time it was an authentic communication, both of which were pleasing to them.

As a specialist, in the last years, I have encountered dozens of cases of young people, even teenagers in the last high school classes and the first high school classes, who use erotic communication in the online environment to overcome their shyness and as a binder of the relationship, from which, in the future, lasting relationships will result. The society has changed and today we see more and more that the way of entering into long-term relationships is one initiated by eroticism and sexuality, then the attachment was born and the communion developed (although in the past societies this was considered reprehensible, the area of sexuality being the last discovered).

We can say with certainty that storing the photos in the mobile phone is only the proof of a passion, of a storm of emotions that the one in question has aroused in the client, this one preserving the conversations exclusively and the photos. We understand the girl's ambivalence, probably from here the various missed acts, which led to finding out the factual situation, from the impatience of a meeting in the online environment. We also consider that the girls, around the age of 14, faced an outlet of their own libidinal impulses, which made them at first be so open to such a relationship, later probably through guilt, fear parents and fear of not doing something wrong. Clients repeatedly claim that the girl's physical beauty and charm in the erotic register were triggers for her libidinal impulses, losing her temper and forgetting her age.

At the moment, we identify the bad opinions, the capacity to live the empathy and to understand the girl's ambivalence towards the ones that happened, she realizes her position by exacerbating her guilt and taking everything on herself, the future clinical risk being that of developing a severe Supra I, by which the person concerned is self-punished, with the possibility of following a depressive reaction or disorders of the neurotic spectrum, regarding the rumination of what happened (he has moments when he says he wants to leave the commune and leave his business, because he is very difficult to continue in that situation). His subjective experiences are from the register of wonder and astonishment, being considered unfair and over-punished, as a kind of "scapegoat" of the group, because someone had to take for example, that such things should not happen again.

There is evidence that each time, the client's family has apologized to the girl's family on several occasions, calling for an understanding of the emotional condition of the two, which is by no means an abuser - an abuser or an active type - passive, but it is an erotic position, in which both partners were caught by the mirage of their own intimate experiences, the virtual world facilitating the translation of borders, forgetting age and the passage to the act of photography, which represents the immortalization of a moment of pleasure, lived in a childlike way by both. (Cleckley, 2015) Customers also report that they were concerned about what happened later with the girl in question from the point of view of her evolution, each gladly declaring that she has good school results, that she meets friends, leading a social life appropriate to his age. In general, they have repeatedly wanted to contact the girl directly to apologize and to reset the relationship from other positions, saying that she did not do so to prevent her from experiencing new emotional upsets. As for themselves, the clients made the decision to conduct psychotherapy sessions, both to understand their mistake and to be able to overcome the traumatic reaction to the created situation.

It is difficult to assume that such subjects with a high impulse control regarding the environment of gambling, sports betting, alcohol and substance use, have an exclusive propensity in the erotic sex register with minors. As a result, what happened is an isolated incident, the product of a moment when the subject's censorship of consciousness decreased, given the conjuncture (the attraction to the eroticism of the girl, the communication in the virtual environment, the slide towards pleasure of reverie type), all being facilitated by the social climate. Cultural group of which each one is a member.

4.1. An example of study of the documents for one case

Analyzing the snapchat conversations between the two, we notice the open discussions, in the same simple register, with few words and object communications, focused on actions, situations, desires and impulses, communications that do not have a genuine pornographic and sexual character by far. , but there are children's messages, carried out in a cultural environment in which the limits are permissive. The injured party expresses his adolescent sensuality, saying in a natural way: "I also do stupid things with you if you want," "Did I say that now if I didn't want to?", "Do you think I had time to do something and I didn't do it?"

In one of the studied conversations it is suggested from the communication that the girl herself would have praised herself in her circle of friends with her relationship with this man, who, in the respective social environment had an invested and valuable image.

Viewed from the perspective of sexology, the messages are not vulgar, but rather in a register of a flirtation imprinted with sexual "spicy," as much as it maintains the atmosphere and the one in question to express to his partner his constant interest for her. One of the photos, though unclear, shows the two in a close-up, even tenderness - they both laugh and seem happy, calm and worry-free - the photo itself suggesting that the client has fully assumed this relationship, as on a mature and serious one, to this also contributing the long friendship between the two families. In another photo, in which the minor is partially undressed and exposes her breasts, from the position of her hand is suggested lasciviousness, not a state of tension or a photo that would have been forced (Burt, 2014).

We consider that today, on the phone of many young people, there are pictures of the partner, in more or less intimate situations. It is to be noted from the search report that only the personal phone contained such photographs. If the issue were to be broadcast, the photos could have been found at least on the memory stick found in the house or on other phones or on the client's laptop. Also, in his phone we keep the existence of 4800 images and 128 films, which indicates that the person in question was negligent in relation to everything he had on the phone and not that he had purposely kept only this kind of photos or movies.

Also, in the studied file, the first communications, and quite a lot, are in a totally non-erotic register, demonstrating that the relationship of the two has taken place on several levels, not just in the sexual erotic one. In some communications, the courage to expose through videos or photos is appealed, which suggests the timidity of both partners and the childish behavior - immature of both, who seem to discover their erotic experiences and tested each other in this register, without being aware that I do something wrong: "Why shouldn't I have it, so dangerous are you that I don't have the courage? (happy emoticons),""Did I say I don't want to? "," Crazy ... ". The vulgar words are found in a playground, among other children's attitudes.

The child's father's statement confirms the girl's attraction to the client. The fact that he urged her to delete her messages from the phone, denotes her concern for this. In contrast, the end of the father's statement suggests some parents who have lost the moment to communicate openly with their daughter about her sex life (the father being away for financial reasons), but who, after learning that she has lost her virginity with another partner before the age of 14, takes her directly to the gynecologist to confirm or deny her deflower. We consider that these attitudes of verification instead of a direct communication with the adolescent, together with the verification of the telephone, its confiscation, the multiple questions and the discussion carried out in the presence of the aunt's concubine regarding the private conversations of the adolescent, caused an evil in the soul of the child, in the area of humiliation and humility, greater than erotic communication with the defendant (the aunt communicates to the father what happened to his daughter in the presence of the concubine). On the other hand, the fact that even the 9-year-old primary cousin has a personal phone, access to Instagram and a mother who can control these things, supports the lack of boundaries in the socio-cultural environment in which the events took place (Latvala, 2015).

The client's statement highlights a determined person, who assumes his facts, as well as their consequences, describing the relationships of friendship between families, telling how the minor was initially more concerned in initiating and maintaining this relationship, with the passing of time the client taking the approach seriously,

passing the discussions into a more intimate register and recognizing his erotic starts that he no longer controlled (Kernberg, 2004). He considered the one in question his partner, on the one hand forgetting the age difference, on the other knowing that "rumors circulated that they would still have sex with different men, usually major ", the one in question considering that the age difference would not be an impediment, as long as he had serious thoughts. Acknowledges the physical attraction, regrets the situation and does not understand its distortion in the registry of child pornography and dissemination of materials in this regard, as long as he perceived his girlfriend as "rebellious" and believed that it had an open relationship with his parents, who are aware of the relationship between the two.

Neither the conversations nor the photographs studied suggest sexually explicit behavior, but rather childlike narcissism, the curiosity of pleasure, need for the exhibition. The entire file studied does not claim that it would be pornographic materials obtained with the intention of being used, but rather childish games played in an area of naivety. In fact, it should be noted that the person in question has no criminal record and no other criminal proceedings against him.

The minor herself acknowledges that she was not threatened or blackmailed with posting videos or photographs, was in no way constrained, and acknowledged that she did not maintain sexual relations, although there were comforts that occurred with her acceptance into the defendant's home, where the girl had been invited with the consent of both families to spend the winter holidays together. This invitation itself demonstrates the serious intentions the subject had towards the partner, despite the age difference. We assume implicitly that the girl's parents also acquiesced in this relationship and they anticipated that she could materialize in an intimate register, since they gave their consent for their daughter to spend a night in the man's house (Barnes, 2013).

The second statement given by the victim is a redundant one, totally unaffected, from which it appears that he would prefer not to be in this situation where he is asked so much about adolescent toys, in which he tests his femininity, healthy narcissism and curiosity about his ability to conquer a man considered valuable. Nowhere in all the statements given by it does the release of disgust, displeasure, or obligation arise, but on the contrary, the person in question acknowledges that he has walked in this erotic playground (Butcher, 2014).

From the study of the documents it appears that the girl's father was informed that she is no longer a virgin, before the one in question begins the relationship with the client. It highlights a social environment in which it goes directly to the facts - the girl is brought to gynecological control, criminal complaints are made - emphasizing the humiliating hypostases in which it is put, without being advised on her emotional and erotic needs and the manner in which who could manage them. In other words, the whole created situation is by far not one that defends the child, but one that raises the culmination of adolescent hypostasis and a relationship in which only the age difference should be commented on (Akhtar, 1992).

The concept of danger related to this subject does not prove its importance, the one in question being rather a timid structure, which chose this way of communicating with the child in order to reveal its attraction. Everything had an intimate, bilateral character, the images were not disseminated to third parties or in the public virtual space, the attitude of the defendant was a sincere one, he did not deny the relationship at any moment, assuming his responsibility and regret and asking for his sorry for what happened (Shi, 2012).

The word antisocial used in the grounds of appeal is totally inappropriate regarding the client in this case, the personality and the antisocial behavior assuming: multiple conflicts with the law, mal-adaptive behavior (not the case, the subject owns a business that he controls and which is success), the absence of remorse, the absence of emotional sensitivity, the presence of aggression, irritability (things that never happened), dishonest activities, carelessness towards one's own safety. Also, the term antisocial involves scam, repeated lies, false names, fraud for profit, repeated beatings, indifference to harm, ill-treatment or theft. We do not find any of these elements in the case of the client, which is why we consider the terms "antisocial acts" and "analysis of the degree of social danger" vis-à-vis a citizen with a successful business.

If the child was somehow ridiculed by the entourage, the fact happened because of the media not by the two, but by a poor management of the situation. We cannot speak of "the production and procurement of child

pornography," the terms are extremely far in comparison with a relationship in which the feelings nourished by each other were obvious. The disjunction between the fact that this client is the author of the initiation of the respective photographs and the fact that he kept them on the phone is only a symbolic disjunction, psychologically, different psychological facts or contents cannot be considered, on the contrary, the communication continues for a longer period for a long time only with the girl in question expresses a serious and consistent choice (for all this time the client was not interested in obtaining pictures, films or any other erotic material from other girls and did not have another girlfriend or friend).

5. Conclusions

The psychological expertise of both the clients and the documents they presented, confirms the hypotheses and states:

-The person in question has a normotensive personality, located within the wide limits of normality, without revealing an intra-psychic dynamic of pathological type, except for a timidity, a structural sensitivity, which made him more fragile and allowed him to slip. Easier in the register of erotic reveries.
- The prolongation and the excessive accusation of both participants in this communication in the erotic-sexual register expose the girl to look at her own adolescent games in a register of serious facts, which bring public opprobrium, and on the client to develop reactions of the neurotic type under stress. (Shaw, 2012)
- The importance of the socio-cultural climate in which the events took place is not to be neglected:

- father absent for objective reasons, which appears intermittently as a presence in the daughter's life, moments when she accuses her excessively - leads to gynecological control and makes criminal complaints for adolescent curiosities;
- the absence of mature women, the majority being away for study or abroad, which gives men in the group options for girls of significantly younger age;
- the absence of boundaries in the communication of the environment of male friends or adolescent girls, as well
- absence of limits regarding the control of an adolescent - she is left alone at home with an older man, during the night, was never supervised or caught during his erotic manifestations alone in the room, but his phone is taken by parents and is taken directly to the Police in the same way that she, as a teenager, is taken directly to gynecological control, before being advised in any way.

- We consider that there can be no disjunction between the fact that the person in question requested the photos and kept them, being about the same psychic content, namely the attraction and the desire for the girl, which he looked at seriously. despite the age difference.
- The content of photos and communications on snapchat, although it contains vulgar words, is imprinted with childish eroticism, playground, naivety, flirtatiousness.
- The concepts of antisocial and dangerous have nothing to do with the personality structure of the client nor with what has happened freely agreed between the two.

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Knowledge of Road Signs and Attitude to Safety Measures Among Public Secondary School Students in Jos Nigeria

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Abstract
Introduction: Road traffic crashes are common worldwide. However, most attention on RTA prevention has been focused on secondary and tertiary prevention. This study was undertaken to assess knowledge of road signs and attitudes to safety measures among secondary school students in Jos, Nigeria. Methodology: Descriptive cross-sectional study among 800 secondary school students selected using a multistage sampling method. Research instruments used were semi-structured interviewer-administered pre-tested questionnaires. Data were analyzed using the SPSS software version 23.0. Mean scores were generated for the major outcome variables of knowledge of road signs and knowledge and attitude to safety measures. Results: Mean age of respondents was 13.0+ 8.4 years, while the parents of 500(62.5%) of them had a vehicle. Correct knowledge of signs of corner bends was 417(52.1%), and traffic lights 579 (72.4%). Good mean knowledge of road signs and safety measures was 55% and 78%, respectively. Predictors of good knowledge of road signs include being a female, older age, and parents having a vehicle. Conclusion: Knowledge and attitude gaps still exist, and stakeholders in RTA prevention should prioritize the sensitization of the students amidst other primordial prevention strategies.

Keywords: Road Signs, Safety Measures, Road Traffic Accident, Secondary School Students/Adolescents

Background

The predominant mode of inter-and intra-city travel for most African countries is road transportation, which conveys about 90% of goods and persons (United Nations, 2009). In Africa, efforts to combat the adverse effect of road transports are minimal, resulting in worsening road traffic accident indices, when compared to other regions. (UN, 2009) Road signs are warnings against possible dangers and provide information to road users on how to keep the roads safe, including caution, regulations, restrictions, prohibitions, and locations (Ritaparna, 2004). According to the World Health Organization (WHO, 2015), over 1.2 million people die each year on

roads worldwide, making Road Traffic Accidents (RTA) the 9th leading cause of death across all age groups globally, and are predicted to become the seventh leading cause of death by the year 2030 (WHO, 2015).

Road traffic accidents occur throughout the word. Thousands of people lost their lives on the road every day. Road crashes are common in Nigeria. In Jos in Plateau state, a total of 68 persons died in 204 road crashes between January and December 2012, and some of these road accidents are related to refusal to adhere to traffic regulations and signs. Furthermore, data from the Federal Road Safety Commission (FRSC) revealed that an average of 13 people dies from road accident daily across Nigeria (FRSC, 2012).

Nigeria, like many other parts of the world, is experiencing a rapid increase in motorization without having adequate road traffic signs and safety mechanisms in place to control the growing number of crashes and injuries. In many communities, road signs are too few or not conspicuously placed. Primordial prevention geared at the prevention of risk factors to non-communicable diseases would benefit the occurrence of RTA. This study targets a vulnerable group who are not yet at risk of being a human factor to RTAs (secondary school students) since they are not eligible to drive a vehicle because they are underage. Studies on knowledge of road signs and road safety would contribute to promoting the implementation of road safety measures at regional or national levels, as well as assist decision and policy making in that direction. Thus, this study was undertaken to assess knowledge of road signs and attitudes to safety measures among secondary school students in Jos, Nigeria.

Methodology

Study area: The study was carried out in Jos (located in Plateau State), which is an urbanized city in Northern Nigeria. The city has a total of 75 registered secondary schools, both public and private. Most roads in the city of Jos have no road signs and some of the roads are dilapidated with pot holes, or are still under construction. There are numerous health facilities at primary, secondary and tertiary levels, where cases of road traffic accidents could be managed. The prevalence of road traffic accidents in the study area is not known due to poor record-keeping practices.

Study design: The study employed a descriptive cross-sectional design, to assess the level of knowledge about road signs and attitude to safety measures among secondary school students in Jos North LGA.

Study population: The target population consists of all secondary school students aged 10 – 19 years in their various schools. Students from private secondary schools were excluded from the study population because of the bureaucracy associated with data collection.

Sample size estimation: Sample size estimation used the Leslie Fishers formula for a population greater than 10,000 and a prevalence of 2.1%. A calculated minimum sample size of 733 was rounded off to 800 to account for non- response, attrition, and improperly filled or non-usable questionnaires.

Sampling method: The multi-stage sampling method was employed. In stage 1, two LGAs out of three were selected in Jos by simple random sampling employing simple balloting. In stage two, two schools per LGA were also selected by simple random sampling employing simple balloting. Questionnaires were equally allocated to LGAs and schools. In a school, all the levels were considered, however one arm (or class) per level were selected by simple random sampling employing simple balloting in stage three. To select study subjects, a list of the students was obtained from the class register (sampling frame) on the day of the visit. A systematic sampling of one in three students was obtained (after selecting the first candidate at random), and this continued until allocated questionnaires were exhausted to complete the 4th sampling stage.

Research instrument: Data were collected through the use of a semi-structured, self-administered pre-tested questionnaire that was divided into three parts, namely socio-demographic data, data on road signs knowledge and attitude, and data on road safety knowledge and preventive practices. The questionnaire was reviewed by the Plateau state epidemiologist in charge of non-communicable diseases.

Ethical consideration: Data were collected during school hours after seeking the consent of the school principals and the class teachers. The rationale for the study was explained to the students by addressing them in the classroom. A written informed consent was obtained from each student.

Data management: Data were collected, entered and analyzed using the SPSS version 23. The results were summarized in frequency tables and charts. Further analysis was carried out using the chi-square test and binary logistic regression to demonstrate association between major outcome variables and socio-demographic data of respondents. *P*-value was considered significant if equal or less than 0.05

Results

Table 1: Background information of respondents (n = 800).

Background information of respondents	Frequencies	Percentages
Sex		
Male	386	48.2
Female	414	51.8
Age (Mean 13.0 ± 8.4) years		
Under 10	89	11.2
11 – 20 years	412	51.4
21 years and above	299	37.4
Class		
JSS 1 – 3	291	36.5
SS 1 – 3	509	63.5
Father's occupation		
Civil servant	462	57.7
Private	288	36.0
Others	50	6.3
Mothers occupation		
Civil servant	397	49.6
Private	340	42.5
Others	63	7.9
Does your parent have a vehicle?		
Yes	500	62.5
No	300	37.5
How long have you been in this school?		
Less than 2 year	77	9.6
2 – 3 years	373	46.6
4 years and above	350	43.8

Table 1 shows background information of respondents. More than half 412 (51.4%) of them were between the ages of 11 – 20 years, with average age of 13.0 ± 8.4 years. About three- quarter 509 (63.5%) of the students were in the senior secondary school (SS1-3) More than half 426 (57.7%) said their fathers were civil servants, while close to three quarter 500 (62.5%) said one or both of their parents had a vehicle.

Table 2: Awareness of four most common road sign

Road sign	Sign/picture	Correct answer	Incorrect answer
Corner bend		417 (52.1%)	383 (47.9%)
Traffic light		579 (72.4%)	221 (27.6%)
Motorcycle is prohibited		587 (73.4%)	213 (26.6%)
School zone		163 (20.4%)	637 (79.6%)

Table 2 shows knowledge of road signs among respondents, with more than half 417 (52.1%) of the students knowing what the corner bend road sign meant. Majority 579 (72.4%) of the respondents could interpret the meaning of the traffic light sign on the road, while majority 637 (79.6%) of the student could not interpret correctly the school zone sign. Majority 587 (73.4%) of the secondary school student interviewed were able to interpret the motorcycle prohibited sign on the road.

Figure 1: Source of information about road traffic signs

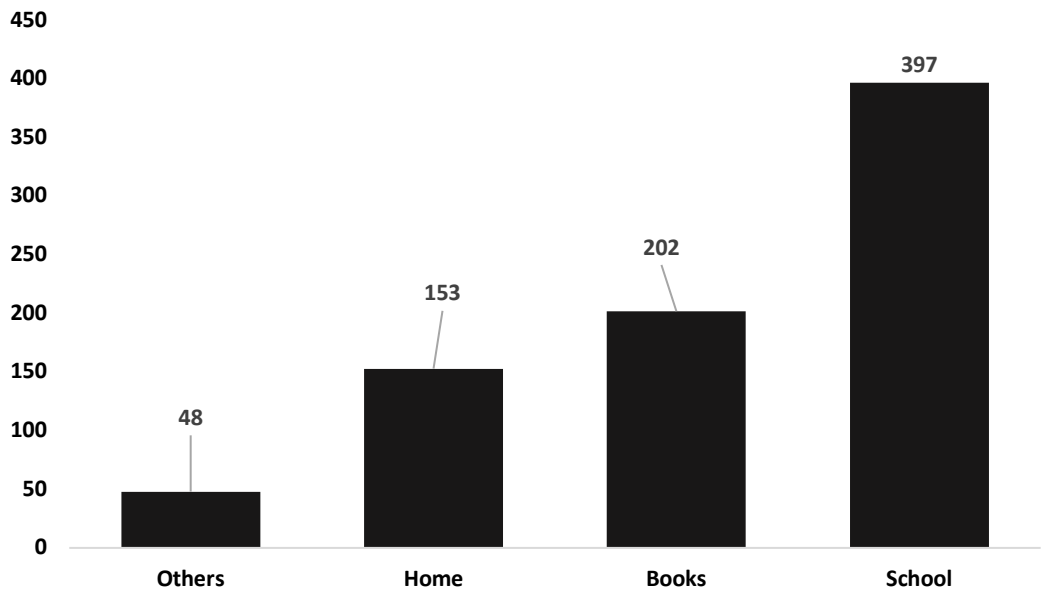

Figure 1 is a composite bar chart displaying respondent's sources of information about road traffic signs. Out of 800 students interviewed, 397 (49.6) of them said their major source of information about road sign was from the school, while few 48(6.0%) of them said it's from other sources like internet, radio, television, etc.

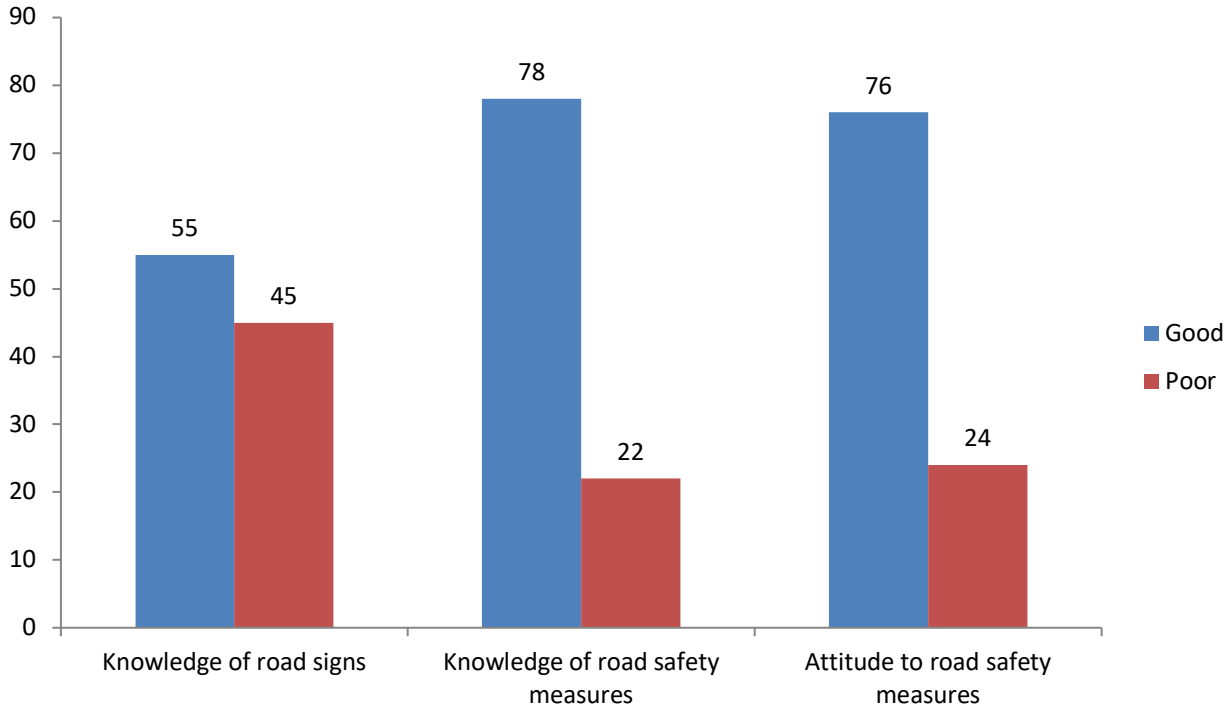

Figure 2 shows a component bar chart of knowledge and attitude to some road safety indices. Close to half (45%) of the respondents had poor knowledge score of the road sign, while 55% of them had good knowledge score of the road sign. The mean knowledge score of safety measures shows that majority 78% of them had positive knowledge scores while close to a quarter 22% had poor knowledge. The diagram also shows attitude to road safety measures with majority (76%) of them having good attitude, while (24%) of them had poor attitude. The same diagram on preventive practices shows that more than three quarters (76%) of the secondary school students interviewed had good knowledge on prevention on the roads, while 24% of them had poor knowledge on prevention on the road

Table 3: Knowledge and attitude to road signs and safety measures and some selected socio-demographic variables.

Variables	**Bivariate analysis**				**Binary logistic regression**			
					(a) Knowledge of road signs			
	Knowledge of road signs		**X^2**	**P value**	**Odds Ratio**	**95%CI**		**P value**
	Good	**Poor**				**Lower**	**Upper**	
Age			43.758	0.001	1.499	0.441	5.098	0.517
Under 10 years	34 (38.2)	55 (61.8)						
11 – 20 years	247 (60.0)	165(40.0)						
21 years and above	209(71.6)	83(28.4)						
Sex			19.971	0.001	0.797	0.253	2.151	0.698
Male	262(69.1)	117(30.9)						
Female*	228(55.1)	186(44.9)						
Parent have a vehicle			36.604	0.001	1.759	0.000	2.143	0.990
Yes	302(61.3)	191(38.7)						
No*	188(62.7)	112(47.3)						

			(b) Knowledge of road safety measures					
	Good	**Poor**			**OR**	**Lower**	**Upper**	**P value**
Age			20.017	0.001	0.649	0.459	0.918	0.015
Under 10 years	69(77.5)	20(22.5)						
11 – 20 years	352(85.4)	47(11.4)						
20 years and above	252(88.1)	34(11.9)						
Sex			6.952	0.031	0.623	0.414	0.939	0.024
Male	312(82.3)	67(17.7)						
Female*	361(88.5)	47(11.5)						
Parent have a vehicle			37.207	0.001	2.464	1.638	3.708	0.017
Yes	448(89.6)	52(10.4)						
No*	225(78.4)	62(21.6)						
			(c) Attitude to road safety measures					
	Good	**Poor**			**OR**	**Lower**	**Upper**	**P value**
Age			23.868	0.001	0.117	0.050	0.272	0.001
Under 10 years	55(61.8)	34(38.2)						
11 – 20 years	287(69.7)	115(30.3)						
20 years and above	238(83.2)	48(16.8)						
Sex			1.299	0.522	0.251	0.143	0.442	0.001
Male	274(72.3)	105(27.3)						
Female*	306(75.0)	102(25.0)						
Parent have a vehicle			32.732	0.001	1.368	0.844	2.217	0.204
Yes	395(79.0)	105(19.0)						
No*	185(64.5)	112(35.5)						

* = reference group

Table 3 shows that a statistically significant association was found between knowledge of road signs or safety measures and attitude to safety measures and age, gender and parents having a vehicle ($p<0.05$). Going by positive odds ratio relative to a reference category, predictors of good knowledge of road signs include being a female, older age and parents having a vehicle.

Discussion

This study aimed to assess the knowledge and attitude of secondary school students in Jos North LGA to road signs and road safety. The fact that most of the respondents' parents possess vehicles suggests that respondents are vulnerable and are at risk of constituting human factor to RTA. Though they are not driving, they are probably watching their parents.

Correct identification of road signs and sources of information

In the present study, more than half of the respondents could recognize the corner bend, traffic light and motorcycle prohibition signs and what they represented. However, only about a quarter could interpret the school zone sign. This finding is similar to that of Mahawar et al (2013) in Indore among school going teenagers; and Kulkarni et al (2013) in South Indian. It reported that three quarter of the students indicated they knew corner bend sign and half knew both traffic light interpretation and motorcycle prohibited sign correctly. The generally good awareness of road signs in these studies could be because the knowledge of road signs is routinely being taught in primary and secondary schools including Nigeria. Good knowledge of road signs is favourable to the control of RTA as the students would be able to recognize road signs and follow the interpretations when they are eligible to drive in the nearest future. This would help to prevent road traffic crashes and injuries, thereby fulfilling a major objective of the school health program. The higher figure of awareness of corner bend sign in the Indorean study could be due to good availability of road signs on their roads compared to Nigeria.

Major source of information on road safety was obtained from the school in this study. This is in keeping with similar studies conducted among school students in France by Blincoe et al. (2002), where it was clearly

indicated that most of the students got their information on road safety from their schools. The similarity could be as a result of inclusion of road safety rules and regulation in the student curriculum and sensitization of students and teachers by road worthy agencies. In addition, the information about road safety rules is usually given during school health program.

Knowledge of road signs and safety measures

Good knowledge of road signs and road safety measures were reported among about three quarters of our respondents. Similarly good knowledge was reported in a Nigerian study among half (Adogu et al., 2006), and another study in India among adolescent students that reported adequate knowledge among just about half of the respondents (Ranjan DP et al., 2018). The higher knowledge level in this study could be due to the possession of vehicle by a parent of at least two-third of the respondents, leading to better awareness. In addition, certain environmental and contextual factors may have come into play to bring about the disparities observed.

Pertaining to the use of seatbelts while in a car, more than three-quarter of our subjects responded that they always made use of seatbelt, and only few indicated non-use. A similar work by Raj et al. (2006) in India reported that more than three- quarter of student agreed with the use of seat belt. In this study, three- quarters of respondents were aware of the importance of seat belt, which agreed with the findings of Raj et al., (2006). These findings could be due to understanding of the regulation on seat belts by school students, regular enforcement of the use of seat belts by the FRSC, and the introduction of physical and health education/health science in the school curriculum.

Knowledge and attitude towards road safety measures

On the attitude of respondents towards road safety, majority of the respondents said they were comfortable with having road signs by the road side, close to half said they could interpret road signs very well while less than one quarter believed they did not have any responsibility on the road. Related study by Maha et al., (2007) and Kulkarni et al., (2012) reported similar findings. These findings could be adduced to the cosmopolitan nature of the study area and a better improvement on road safety education and communication in the countries where the survey was conducted.

Association between knowledge and attitude to road signs and safety and some socio-demographic variables

Mean knowledge and attitude scores was assessed against selected socio-demographic variables that could influence the findings of the survey viz age, sex and parents' possession of vehicle. Ranjan et al. (2018) also reported knowledge adequacy about road safety rules and regulations had statistically significant association with age and gender. This study revealed that female students of 9 years and above had positive attitude compared to their male counterparts. The increment of knowledge of road signs with age is not unexpected. As one grows older, there is every tendency to behave more maturely and responsibly in order to keep away from harm and danger. The better attitude to road safety among females when compared to male may be attributed to their delicate, gentle and careful nature, as well as always wanting to pay attention to details.

Parents having a vehicle are a predictor of good knowledge of road signs, and knowledge and attitude to road safety measures. Respondents whose parents had vehicles had better attitude and knowledge of road signs and safety, compared to those whose parents did not have vehicles. Possession of vehicles by parents may have contributed to the increased knowledge of the respondents from observing and taking note of their parents' road safety behaviors while driving their vehicles.

Study limitation

A limitation of the present study is that the findings may not be generalized on out of school adolescents. The study is also limited by its cross-sectional and self-reporting nature. However, the study will serve as a guide for planning and implementing interventions targeted at improving road safety practices among students generally.

In conclusion, there is good knowledge of road signs, and good knowledge and positive attitude towards road safety among a significant proportion of students surveyed. A significant knowledge gaps still exists among the students, and more efforts are needed to be done in that regard. It is necessary to institute road safety programs in schools, aside including it in the school curriculum, so that students could be more involved in road safety practices and make them more conscious of their environment, resulting in reduction of road traffic.

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Epidemiological Profile of Facial Fractures at the Department of ENT and Maxillofacial Surgery at the Mohammed VI University Hospital Oujda Morocco

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Abstract
Maxillofacial trauma is defined by the structures located between the capillary line upward and the tip of the chin downward. Our study is retrospective, covering 112 cases of extensive facial fractures over a period of two years from October 2016 to October 2018. Soft tissue lesions are excluded from our study. The goal is to define the epidemiological profile of facial fracture victims in Oujda and to adapt therapeutic modalities to local contexts. The incidence was highest in the 21 to 30 age group (36.6%). There were 7.6 men for a woman. The most common etiologies were in descending order; traffic accidents (60%), assaults (29%), sports accidents (6%). The frequency of these traumas increased in summer, especially in July-August. Mandible and nasal bone were the most affected (48.21% and 21.42%). In 16.96% of cases, it was a polytrauma. Head trauma was associated in 7.14% of cases.

Keywords: Facial Trauma, Maxillofacial Fractures, Epidemiology

Introduction

Maxillofacial trauma represents a big part of the activity at the ENT and maxillofacial surgery department of Mohammed VI University Hospital. Therefore, specific preventive measures and treatment regimens adapted to the national epidemiological particularities are essential for the management of facial fractures. There has been no previous epidemiological study on facial fractures in Oujda. The purpose of this study was to describe the epidemiological characteristics of maxillofacial fractures our town.

Material & methods

This is a retrospective epidemiological study over a two year period from October 2016 to October 2018, for which we have treated all the files of patients with maxillofacial trauma. 112 cases were recorded of patients

treated at our department. A sheet was prepared for each patient and the following information was recorded: sex, age, date of trauma, etiology, fracture site and clinical aspects.

Results

The average age of our patients was 29 years old. The sex ratio was 6.7 / 1 with male predominance in all age groups (figure 1). The peak frequency of fractures was between 20 and 30 years old in both sexes. August and July are in order of frequency the busiest in terms of maxillofacial trauma, with respectively: 18 and 15 patients (figure2)

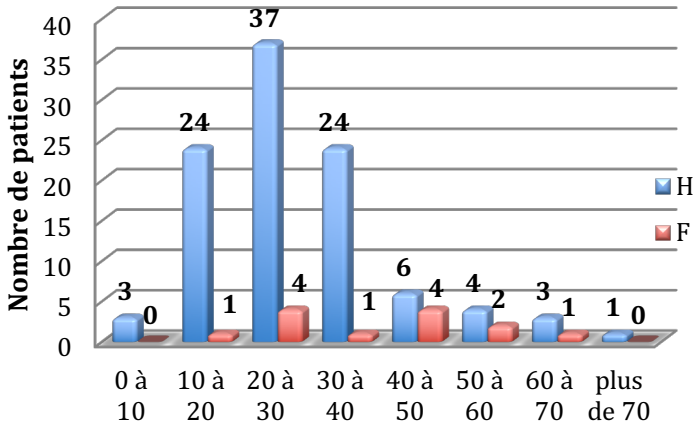

Figure 1. Age according to gender

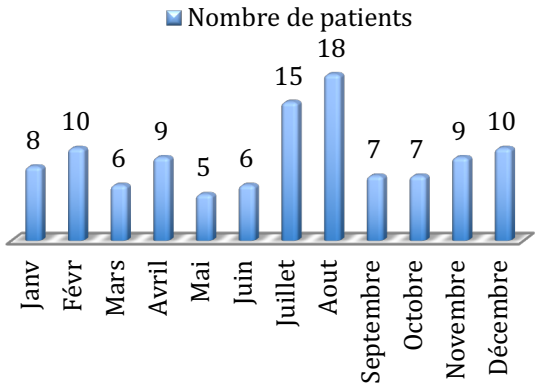

Figure 2. Monthly distribution

The etiologies of facial fractures in our study are represented by traffic accidents with 60% of cases, assaults totaling 29%, the remaining 11% of cases include sports accidents, work accidents, home accidents and other various etiologies. 57% of traffic accidents involved a two-wheeled vehicle (motorized or not) (figure3).

Traffic accidents were the leading cause of fractures in age groups above 10 years old, while between ages one and ten, home accidents were the most common (figure 4).

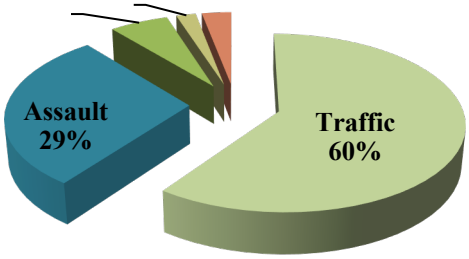

Figure 3. Etiology percentages

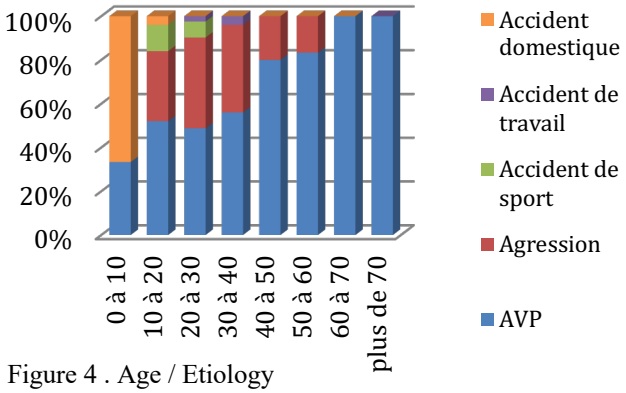

Figure 4 . Age / Etiology

Pain and ecchymosis/edema were the main complaints (figure 5). Fractures were associated with facial wounds in 39% of cases, divided according to facial areas in the figure (figure 6).

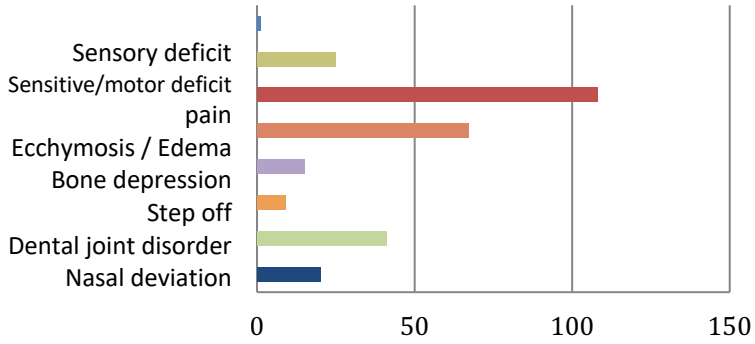

Figure 5. Clinical sings

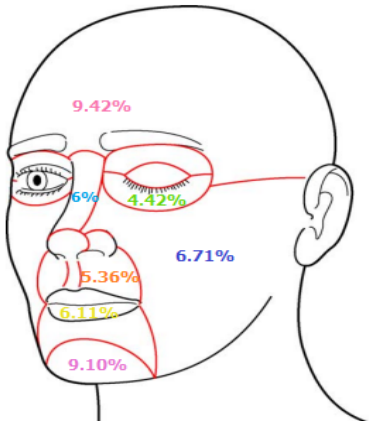

Figure 6. Facial wounds

Associated lesions were essentially skull trauma with 7.14% of fractures and lower limbs 5.35% (Table 1). Fifty-four patients (48.21%) suffered mandibular fractures. In 54.6% of cases, the lesion affected the middle third of the face and in 2.67% the upper third (Table 2). The dominant mandibular fractures are angular fractures at 42.3% (figure 7). The angular and parasymphyseal fractures are the most common association (table 3). The dominant etiology for mandibular fractures is (figure8).

Table 1 : Associated lesions

	Number of patients	%
Skull	8	7.14%
Spine	1	0.89%
Upper limbs	5	4.64%
Lower limbs	6	5.35%
Thorax	4	3.57%
Abdomen	3	2.67%
Pelvis	2	1.78%

Table 2 . Site of fracture

Site of fracture	Number of patients	Percentage %
Lower third	**54**	**48.21%**
Mandibular fracture	54	48.21%
Middle third	**61**	**54.46%**
Fracture of maxilla	12	10.71%
Zygomatic fracture	21	18.75%
Nasal bone fracture	24	21.42%
Orbital fracture	18	16.07%
Upper third	**3**	**2.67%**
Frontal fracture	3	2.67%

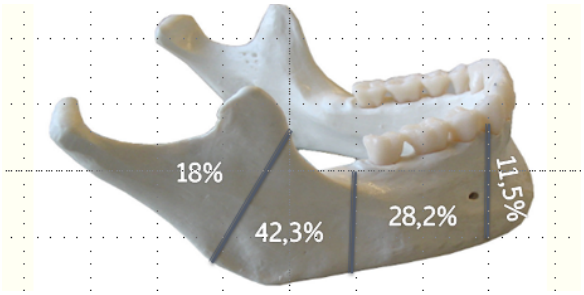

Fig 7 : distribution of mandibular fractures

Table 3. Bifocal mandibular fractures

	Number	Percentage
Angular + Parasymphyseal	10	41.67%
Angular + condylar	5	20.83%
Angular + symphyseal	3	12.50%
Condyar + parasymphyseal	5	20.83%
Condylar + Parasymphyseal	1	4.17%

Discussion

The epidemiological profile of maxillofacial trauma in the region of Oujda is that of a Muslim country heading towards westernization. The significant amount of traffic accidents makes it necessary to undertake a serious public health reflection and a political effort aiming to its prevention. The trauma's epidemiological profile varies according to demographics, cultural habits, industrial environment, transports, political climate, country's legislation (especially concerning road safety ever since Morocco adopted the new Highway Code) and hospital recruitment. The population of our study is very much representative of the general Moroccan people, due to the largely rural and urban recruitment in our department.

Facial fractures affect mainly the young male (30 years old on average). This is explained by risky behaviors during sports practice, motorcycling, driving and violent altercations [Gassner et al. .2001]. In Japan [Iida et al., .2001][Iida et al. 2002], the dominant age group is between the ages of ten and twenty. While in Tunisia, the dominant age group was similar to our study (20 to 30 years old). As for sex ratio, it largely varies in the literature. Our sex ratio (6,7/1), is at the upper limit with a female minority. Polish, Marrakchi and Tunisian series come close behind [Bouguila et al. 2008] [Qachab et al. 2011]. On the other hand, the sex ratio in Italy approaches equality (1.81/1) [Bonavolonta et al. .2017]. Summer holidays encourage people to do more activities and road trips. This makes it the busiest period in most studies.

The etiologies of facial trauma are completely correlated to the geographic and socioeconomic context of the country. In countries like Morocco [Qachab et al. .2011], Italy[Bonavolonta et al. .2017], Tunisia and Brazil, Traffic accidents are the main cause of facial trauma [Brasileiro et al. 2006][Bouguila et al. 2008]. In the meantime, countries with an old population prone to home accidents and very disciplined drivers like Canada [Al Dajani et al. 2015] have home accidents as the first cause of facial fractures. In other regions like the French Alps, ski accidents are the main cause [LeBeau et al. 2006].

It is almost unanimous in the literature that the mandibular fracture is by far the most common facial fracture [Brasileiro et al. 2006][Bouguila et al. 2008][Parluska et al. 2006]. It is the first facial bone to hit the ground is case of a fall. The most common forms of bifocal mandibular fractures according to [Gola et al. 1994], are the parasymphyseal fractures associated with contralateral angular or contralateral condylar fractures. These results are consistent with the results of our series.

Conclusion

Facial fractures are more and more frequent. Better knowledge of their epidemiology has several implications: setting therapeutic priorities, research on preventive measures, legal, medical and social assessment and of bodily injury.

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Lipomatous Meningioma

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Abstract
Lipomatous meningiomas are a very rare form of brain meningiomas whose clinical presentation and treatment and prognosis remain similar, but whose histological appearance finds in addition to meningothelial cells, the adipocyte-like cells' accumulation within the tumor. Computerized tomographic and Magnetic resonance imaging (CT) or (MRI) can visualize the fat accumulations, but the histological investigation makes the diagnosis. In this case report and review of the literature, we discuss how to recognize the symptoms associated with lipomatous meningiomas and the definitive treatment approach for these rare tumors.

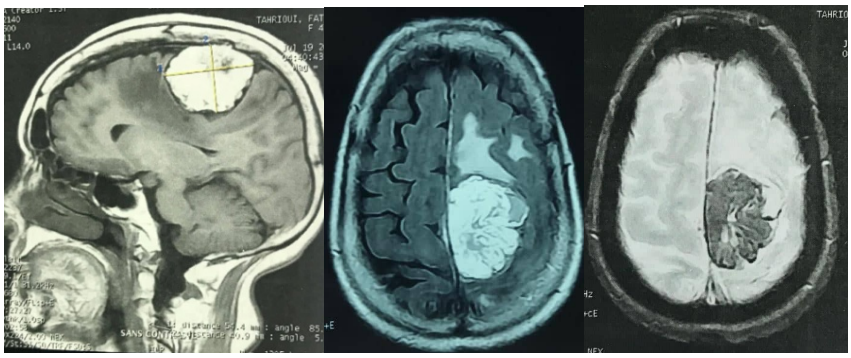
Keywords: Lipomatous Meningioma, Brain, Symptoms

Introduction

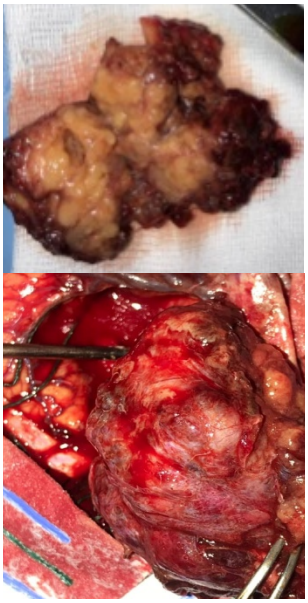
Lipomatous meningioma was the First time reported by Bailey and Bucy in 1931 (Bailey P1931; 15:15–54). It's considered like a very rare variety of meningioma where adipocytes and lipoblasts contribute to fat accumulation within the tumor (Roncaroli F 2001; 25:769–775). It is well described histological but uncommon. Roncaroli reported that lipomatous meningioma represents 0.3% of meningiomas. (Roncaroli F2001;25:769–75) Classified as metaplastic meningiomas In the 2000 World Health Organization Classification of Tumors of the Nervous System, as are meningiomas with osseous, cartilaginous, myxoid, and xanthomatous changes (Louis DN; 2000. p. 179).In this report, we present 70 years of an old woman that was found to have a left parietal parasagittal lipomatous meningioma benefiting of a total resection of the tumor. We provide a detailed review of the literature and provide relevant discussion for managing patients with lipomatous meningiomas.

Case report

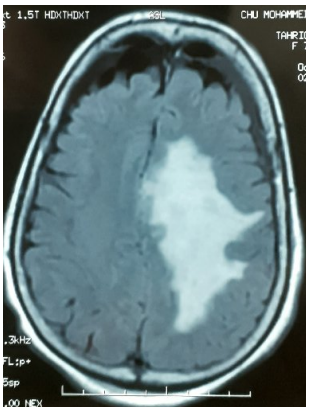
The patient is à 70 years old women with no history who was complaining about an intermittent headache aggravated by the occurrence of a partial epileptic seizure of the right hemibody without other associated signs for which she consulted in our facility where we found on physical exam an hemiparesis of the right hemi-body, benefiting from a radiological assessment finding of a left parietal parasagittal mass.



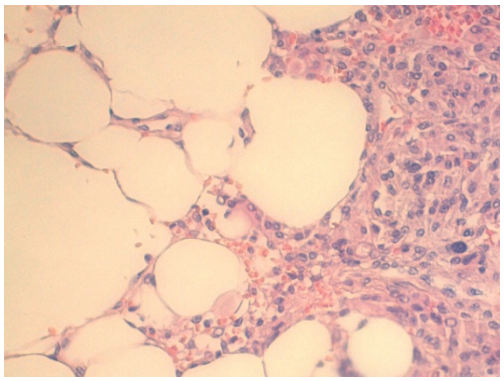
CT brain revealed one hypodense lesion in the left parietal parasagittal side and MRI showed hyperintensity of the lesions on T1-weighted sequence, along with contrast enhancement on T1 + Gadolinium, and about the therapeutic management our patient benefited from a Simpson grade II resection of the tumor that find at the macroscopic aspect of the lesion like the aspect of meningioma but with lipomatous portion yellow colored tissue.



The evolution was marked initially by a by a good improvement of its hemiparesis aggravated 48 hours later by the appearance of an aggravation of its hemiparesis becoming a right hemiplegia benefiting from a radiological control returning in favor of an oedematous reaction of the operating site for which she has continued the corticotherapy treatment associated with a physiotherapy having a progressive improvement of her right hemiplegia



The anatomopathological study was in favor of Lipomatous meningioma without other metaplasic component.



Discussion

Meningiomas are considered benign, slow-growing lesions and usually occur in the middle to late adulthood age, and are considered like the most frequent extra-axial central nervous system tumors (Alexiou GA 2007;25:867-90). The male: female ratio is 1.0: 2.6, and the average age for lipomatous meningioma presentation is 50 years of age with a range from 22 to 74 years reported in the literature (Tang H 2013; 25:112–118). When it comes to the Clinical presentation, the surgical management, and the global prognosis, it is similar to classic meningiomas (Louis DN 2000. p. 176- 84). The frontal and parietal convexities are the most frequent reported locations. But some locations like in the skull base and spine have been reported (Roncaroli F2001;25:769–75) (Lattes R1991;22:164–71).

The Metaplastic meningioma is a rare subtype of WHO Grade I meningiomas, histologically characterized by the presence of "metaplastic changes" involving mesenchymal components, such as osseous, cartilaginous, lipomatous, and myxoid tissue (Roncaroli F 2001;25:769-75), Lipomatous meningioma is macroscopically composed of 2 populations of cells in varying proportions: typical meningothelial cells and adipocyte-like cells (also called lipid-laden cells)(Louis DN 2000. p. 176- 84).

The clinical features like Seizure, headache, and hemiparesis are the most common symptoms.And the prognosis of lipomatous meningioma is no different from those of usual meningioma (Roncaroli F2001;25:769–75) (Mariniello G2001;11:481–2., 487).

Radiologically the tumor is usually hypodense on CT and shows high intensity on T1- weighted and T2-weighted MRI, and the high intensity area on T1 weighted MRI is changed to a low intensity area on fat-suppressed T1-weighted imaging (Roncaroli F2001;25:769–75) (Bleggi-Torres LF2001;11:481–2., 487) (Kimiwada T2004;21:47–52) (Mariniello G2001;11:481–2., 487) (Withers T2003;10:712–4). The surgical management after theradiological identification is to make a total resection of the tumor, which is the case in the majority of the patients (Withers T 2003; 10:712–714), and the macroscopic view of the tumor finds in the lipomatous portion a smooth-surfaced tissue and yellow colored. (Roncaroli F2001;25:769–75)(Lattes R1991;22:164–71)(Withers T2003;10:712–4)(Fitt GJ1996;40:84–7)(Kasantikul V1984;26:35–9). Following the total resection, Fortunately, the diagnosis requires histopathologic evaluation (Krisht KM 2012; 116:861–865), lipomatous meningiomas, are not metastatic, and do not require chemotherapy or radiation following resection. (Dulai MS 2009; 29:708–712)With a low percentage of recurrence. Only 17% of lipomatous meningiomas recurred in the case series by Roncaroli and colleagues. (Roncaroli F 2001; 25:769–775)

Conclusion

Lipomatous meningioma is a rare type of meningiomas that are WHO grade I that have lipomatous characteristics on imaging including either CT or MRI, with a good prognosis after complete removal followed by the identification of meningothelial lobules and adipocyte-like tumor cells confirms the diagnosis.

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Son preference Among Mothers in Mosul, Iraq

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Abstract
Introduction: Son preference is a form of gender discrimination based on the belief that girls are inadequate and of lesser value than boys. It affects couples' fertility and may act as an obstacle to fertility decline. Aim: The study is aiming for estimating prevalence of son preferences among mothers in Mosul, Iraq and detecting its relation with actual and desired parity. Subjects and Method: Cross-sectional study was achieved in Mosul, Iraq. Inclusion criteria were "currently married mothers who consulted one of the primary health care centers. Results: The study interviewed 1761 mothers who their mean age was 36.3 years and ranged 15-79 years. More than half of them (54.1%). Most of them were Muslims (93.9%) and Arabs (83.7%). The study reported 338 mothers preferred to have only sons (making prevalence of son preference as 19.2%).It was significantly associated with having or desire to have high parity (22.8%, 0.01 and 29.2%. p=0.000). Social and economic gains were the most motivations (82.2%, 17.8%) for preferring sons. Conclusions: Two out of 10 mothers in Mosul prefer to have only sons for mainly social welfare.

Keywords: Son, Parity, Illiteracy, Mosul, Social

Introduction

Son preference refers to parents' attitude for a male child. It is based on the belief that girls are inadequate and of lesser value than boys so that their births are not being welcomed. Such attitude is considered as a major form of gender discrimination that associated with neglect of the girl child in terms of withholding access to health, education, economic welfare and many other basic necessities. Even so, it may manifest itself through the practice of sex selective abortion.

So, having at least one son, especially in East and South Asia, North Africa and Middle East, where the societies are mostly patrilineal and patriarchal, is imperative for the continuation of the family ancestry. Furthermore, having many sons provide additional status to the family. All these areas are described as most high-fertility societies.

Son preference is the result of deeply rooted traditions that state "sons are desired for the purpose of family propagation, old-age security, the provision of labor, and the performance of ancestral rites. Many still hold to the old Chinese belief that “many sons bring much happiness.”

Since the general fertility rate reflects peoples' preferences for the number of children they would like to have. Preference of sons, in particular, affects fertility behaviours of couples trying to achieve a desired number of sons, since the parents of girls are more likely to continue reproduction as an effort to acquire sons. A strong preference for sons may be an obstacle to fertility decline if couples are not satisfied with sex composition of their children.

The study is aiming for estimating prevalence of son preferences among mothers in Mosul, Iraq and detecting its relation with actual and desired parity.

Subjects and Method

Administrative and ethical agreements were obtained from Nineveh Health Directorate to achieve the current cross-sectional study in Mosul, the largest city at the north of Iraq over 10 months duration.

The studied sample was selected by a multi-stage stratified technique in order to confirm representativeness of the three social strata were recognized. Inclusion criteria were "currently married mothers who consulted one of the primary health care centers (PHCCs) during the study period (from 1st of April 2011 to the end of January 2012). The selected PHCCs were having the highest coverage rate and representing 70% of all health centers in Mosul.

Verbal consents were mandatory to be obtained from studied sample and a special form of questionnaire was constructed to inquired the required data.

Results

During study time, 1761 mothers have been interviewed. They were either young mothers (1302 mothers, 73.9%) or grandmothers (459 mothers, 26.1%). Their mean age was 36.3 years and ranged 15-79 years.

More than half of the studied sample (54.1%) were urban while 45.9% were residing peri-urban and rural areas. Most of them were Muslims (93.9%) and Arabs (83.7%). Almost two thirds of studied sample had get consanguineous marriage (68.2%) and living within an extended family-structure (73.4%).

The study has reported 338 mothers preferred to have only sons and 56.6% of mothers preferred to have sons and daughters. Thus, prevalence of son preference was 19.2%. On the other side, 5.5% of mothers preferred to have only daughters (Figure 1).

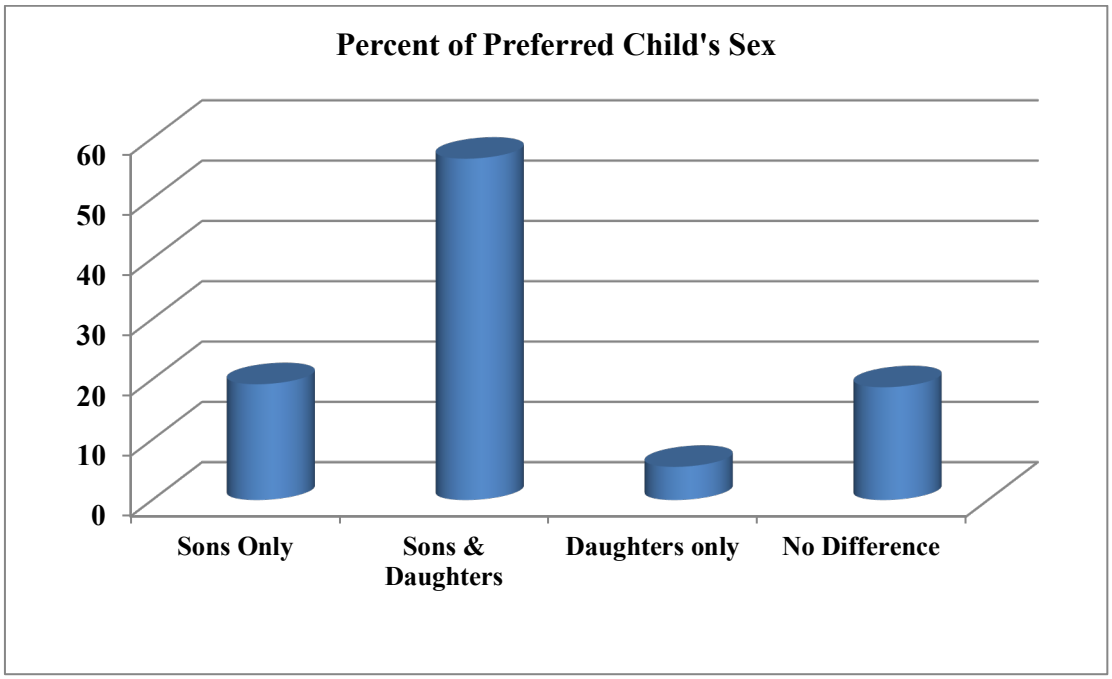


Figure 1: Preferred children's sex among studied mothers

Son preference was reported more frequently among mothers who aged 40 years or older (25.1%, p=0.000) and illiterate (22.0%, p=0.000) Table (1).

Table 1: Prevalence of son preference by the demographic features of studied mothers

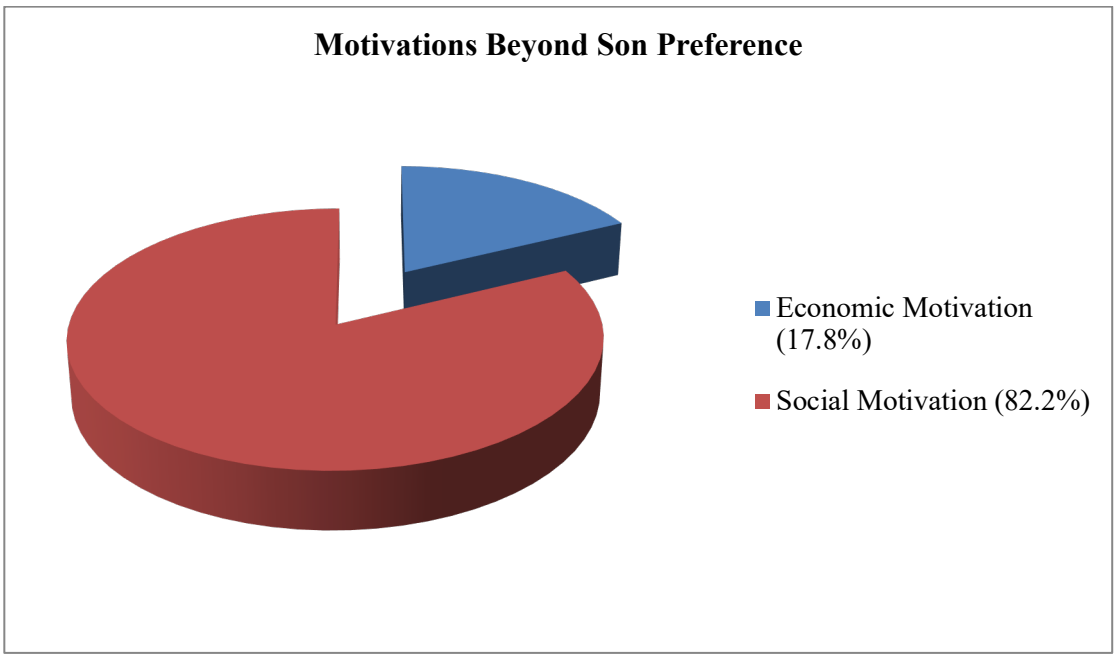
Parity	Son Preference (n=338)		Others (n=1423)		Total (N=1761)		P-value
	no.	%	no.	%	no.	%	
Actual Parity (child per mother)							
≤ 4	171	(17.1)	830	(82.9)	1001	(56.8)	0.01
≥ 5	167	(22.8)	593	(78.0)	760	(43.2)	
Desired Parity (child per mother)							
≤ 4	185	(15.0)	1052	(85.0)	1237	(70.2)	0.000
≥ 5	153	(29.2)	371	(70.8	524	(29.8)	

The association of son preference with actual and desired parity is shown in table 2. Son preference was detected among mothers who had to have or desired to have high parity (having at least five living children) (22.8%, 0.01, and 29.2%. p=0.000).

Table 2: Parity of studied mothers by son preference

Demographic Features	Son Preference (n=338)		Others (n=1423)		Total (N=1761)		P-value
	no.	%	no.	%	no.	%	
Age group (years)							
< 40	186	(16.1)	970	(83.9)	1156	(65.6)	0.000
≥ 40	152	(25.1)	453	(74.9)	605	(34.4)	
Mean	40.1		35.4		36.3		0.000
Range	19-79		15-76		15-97		
Formal education (years of schooling)							
Illiterate	216	(22.0)	764	(88.0)	980	(55.7)	0.001
≥ 6	122	(15.6)	659	(84.4)	781	(44.3)	

Most of the studied mothers who preferred to birth only son (82.2%) expressed social motivations beyond their preference (Figure 2).



Discussion

Since 2005, World Health Organization (WHO) has established the Commission on Social Determinants of Health in order to highlight the role that social factors play in determining all aspects of health. It showed interest on Medical Sociology, to which the current study is belong to, that investigates social (rather than biological) factors in causation of any health state and fertility behaviours.

The general methodology that has a long tradition in alike studies is the cross-section design, so that it was adopted by the current study. Besides, it has the advantage of being fairly quick and easy to be performed. However, it associated with selection bias. The present study included all social strata distributed in urban, suburban and rural setting in order to ensure representativeness.

Son preferences is worldwide phenomenon and is not unique to one region. A 2011 Gallop poll revealed that 40 % of American would prefer to have a son if they only had one child. In Pakistan, as an example for developing countries, study revealed that mothers were treated better by their families when they were carrying a male baby; they were provided special care, good nutrition and rest. One the other hand, conceiving a girl may associated with unhappiness and depression and even divorced for bearing daughters.

A panel data covering eleven Arab countries is analyzed by Al-Qudsi in 2008 revealed that high fertility level and son preference are among the most remarkable demographic aspect of the Arab region. Women tried to improve her social position by having an extra sons. This stat that can be explained by integration of son preference with low educational level (P=0.001) and ultimately desired and actual high parity (P=0.01, P=0.000) as indicated by the current study. Furthermore, the main motivation for son preference as stated by studied mothers was social gain (82.2%) followed by economic causes.

Akmam in 2002 noted that gender stratification in Nigeria society is related to Mothers' educational levels. High fertility and children has been favored in traditional Nepalese society, as reported by Adhikari in 2010, since they are considered a symbol of both social and economic well-being. Nepalese population thought that by having children, preferably sons, a woman raises her status in the family in addition to economic gains and old age security. It is viewed as, he added, a disgrace for a couple, particularly for the wife, not to have a lot of children. They believed in the Nepalese popular saying "May your progeny fill the hills and mountains".

Similarly, Al-Ridhwany and Aljawadi in their cross-sectional study in 2018 have found that 26.3% of mothers thought that high parity would smoothen good socialization achieve social welfare by enjoying life of parents through "Filling the household", as they stated. Furthermore, they reported that financial deficit motivated 29.0% of mothers to prefer having high parity as a hope for monetary gain. They trust the public notion of "Having children especially sons, will decant into your own dish". Beside, another frequent public statement says that "Daughters are indoor workers and sons are outdoor workers."

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Sonographic Assessment of Nephrolithiasis in Patients of Type II Diabetes in the 30 to 50 Year Age Group

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Abstract
The risk of kidney stone production may be increased by type II diabetes disorder. Existing cross-sectional data regarding diabetes mellitus as a predisposing factor for nephrolithiasis is limited. Objective: The sonographic assessment of kidney stones in diabetic patients of age, ranging from 30-50 years. Methods: To evaluate the kidney stones in diabetic patients, a descriptive study was conducted comprised of two groups including 200 participants. The questionnaire was used as a primary data collection tool. Their age and gender were evaluated and with the help of ultrasound, the number of stones and their location in kidney of diabetic patients was examined. Results: 66 out of a total of 200 diabetic patients had shown the kidney stones in them. Kidney stones of size 20mm, 22mm causing obstruction were detected in the diabetic patients while sonographic assessment. On the other hand, stones of size 6mm, 14mm, 11mm which were non-obstructive were also observed. The stones of 22mm and 14mm were leading mild to moderate hydronephrosis. 73 stones were detected in patients. Majority of them possessed single stone whereas, two out them contained four stones individually. Conclusion: There is a presence of kidney stones among diabetic patients. According to the present literature, kidney gets affected due to impaired insulin production and accumulation of excessive glucose, but there is a requirement to conduct additional studies to identify the biochemistry behind it as this present study is only concerned with the assessment of stones among the patients who are diabetic.

Keywords: Nephrolithiasis, Type II Diabetes Mellitus, Ultrasound, Sonographic Assessment, Kidney Stones

Introduction

Nephrolithiasis is defined as the formation of kidney stones. The location of these stones can vary, it can be in the kidney or in the lower portion of the urinary tract. These are the most common cause of abdominal pain as well as the blood in the urine. Cystine, urate, oxalate, and calcium are the components that have contributed to the production of kidney stones and are termed as stone-forming components (William C. Shiel Jr., F. 2019). This condition is considered as the most chronic one after hypertension, and it is ancient too (Worcester EM, Coe FL 2008). Kidney stones are more likely to found in men rather than women moreover, to some extent, the types of stones get varied between the sexes. According to the surveys of NIHS regarding the population of

the US, it is shown that the manifestation of kidney stones has been increasing in both genders from the past 30 years (Stamatelou KK, Francis ME, Jones CA, Nyberg Jr LM, Curhan GC 1976–1994, 2003). The factor which can contribute in the development of stone is obesity because a body mass index increases the danger of kidney stones, but main reasons for an increased incidence of kidney stones are vague and unclear (Taylor EN, Stampfer MJ, Curhan 2005). The damage of renal function is also associated with the forms of nephrolithiasis (Worcester EM, Parks JH, Evan AP, et al. 2006). In most of the nations, type II diabetes has reached an endemic percentage irrespective of their economic status (Evan AP, Lingeman JE, Coe FL, et al. 2005). The central pathophysiological phenomenon is insulin resistance. In parallel to the increased metabolic syndrome, the prevalence of nephrolithiasis is also being silently increasing (Evan AP, Lingeman J, Coe F, et al. 2007). Generally, calcium stones are considered as more prevalent in the patients of nephrolithiasis. On the other hand, various studies have revealed the presence of uric acid nephrolithiasis in patients suffering from diabetes (Parks JH, Worcester EM, O'Connor RC, Coe FL 2003).

Limited data exist regarding the relationship between metabolic syndrome, Type II diabetes, and nephrolithiasis. Previous studies have shown that obese and diabetic individuals have increased the pervasiveness of uric acid calculi as compared to non-obese, non-diabetic subjects. The incidence of stone formation is likely to be seen in women because of the greater possibility of hypertension (Gillen DL, Coe FL, Worcester EM 2005). Obesity is considered as a major etiologic factor of insulin resistance. According to the ADA, it is the most usual form of diabetes and it occurs with increasing age, moreover, usually correlated with the insulin resistance (Devuyst O, Pirson Y 2007). Hence this study is carried out to rationalize the role of diabetes in formation of renal stones.

Methods

In this analytical study, 200 patients were included from Department of Radiology Dera Ghazi Khan Medical College and Teaching Hospital, Dera Ghazi Khan. 200 patients of diabetes mellitus age between 30 to 50 years without discrimination of gender were selected by convenient sampling. The kidneys of Diabetic patients with kidney stones were imaged by the ultrasound machine known as TOSHIBA TA machine 311. The patients were included in this study with their consent if they have diabetes, obesity, family history of diabetes and age between 30 to 50 year. Non-corporative, Non-diabetic, patients with anatomic causes and age less than 30 and more than 50 were excluded.

Results

Out of 200 patients, 134 patients suffering from the type II diabetes mellitus without kidney stones and 66 patients suffering from type II diabetes with kidney stones of age ranging 30-50 years were selected. The frequency mentioned in the table 1 is actually the numbers of patients that had participated in the study. The patients were inquired about their status of diabetes and kidney stones. Among the total 200 participants, 67% were those patients who had diabetes but no kidney stones and 33% had diabetes with kidney stones. All the patients who had type II diabetes were above the age of 30 years. By the help of descriptive statistics, the gender of the patients was evaluated. As it was the non-biased gender-based study therefore both the genders were requested to take part in the study

Table 1. Frequency of Diabetic non-stone formers & Diabetic stone formers

Status of Patients	**Frequency**	**Percentage %**
Diabetic patients without kidney stones	134	67%
Diabetic patients with kidney stones	66	33%
Total	200	100%

Table 2. Gender distribution of participants

Gender	Frequency	Percentage
Male	128	64%
Female	72	36%
Total	200	100%

Table 2 shows Majority of the individuals who participated in the study were males as compared to the females. 64% (n=128) of the sample population was male whereas 36% (n=72) of the total cases were females.

Table 3 shows the patients were divided into four groups according to their age. The group A referred to the people of 30-35 years, group B contained the people of 35-40 years of age, group C represented the people of 40-45 years of age and the remaining group D included the people of 45-50 years of age.

The following table showing the frequencies and percentage of each group's age.

Table 3. Recorded Age Groups of Participants

Age Groups		
Categories	Frequencies	Percentage
Group A (30-35 years)	41	16.4%
Group B (35-40 years)	57	22.8%
Group C (40-45 years)	50	20.0%
Group D (45-50 years)	102	40.8%

The people of age group 45-50 years had made 40.8% as compared to the people of other age, majority of middle-aged adults had participated in this study. The ultrasound machine was utilized for the sonographic assessment of the number of kidney stones among diabetic patients. Total 73 stones were detected among 66 diabetic kidney stone formers. Many of the patients had shown single stone whereas two patients out of them had shown four stones individually. Both the kidneys (left and right) were examined by the use of the ultrasound machine.

Table 4. A contingency table describing kidney stone detection among diabetic patients

Diabetic status of patients * sonographic assessment of Kidney stones Crosstabulation

Count

		sonographic_assessment of kidney stones		
		Detected	Not Detected	Total
Status of Patients	Diabetic non-kidney stone formers	0	134	134
	Diabetic with kidney stone formers	66	0	66
Total		66	134	200

Table 4 shows the row variables are the diabetic patients with and without kidney stones, whereas, the column variable is the sonographic assessment of stones (2 categories: Detected and non-detected). According to the

table, 66 diabetic patients were detected with kidney stones and 134 diabetic patients were detected without kidney stones. The results of kidney stones detected in patients though the ultrasound machine is as follows:

Figure 5.5 (a) Left kidney shows 20mm obstructing calculus seen in the renal pelvis which is making shadow

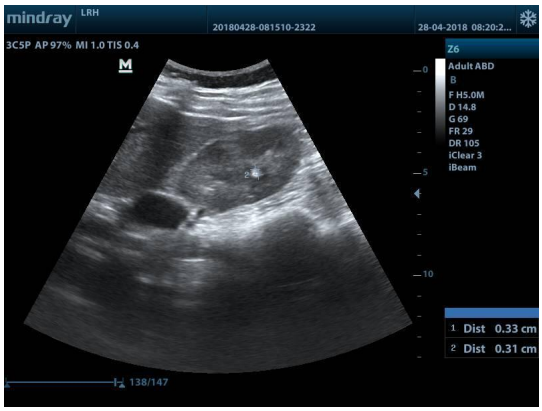

Figure 5.5 (b) Right kidney shows 6mm non-obstructing calculus seen in the mid pole and mild echogenic in texture

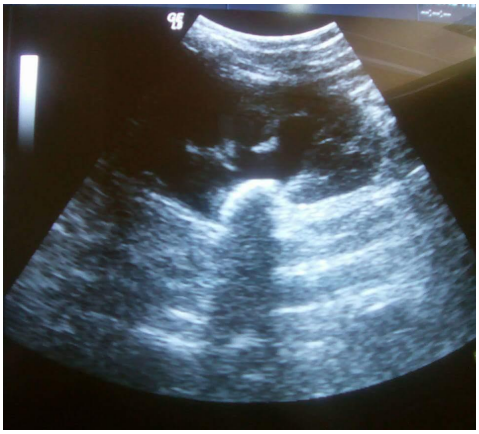

Figure 5.5 (c) Left kidney show 22mm obstructing calculus seen in renal pelvis leading mild to moderate hydronephrosis

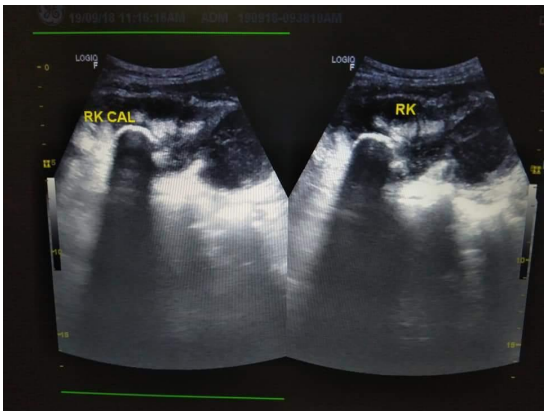

Figure 5.5 (d) Right Kidney shows 14mm calculus seen in superior pole not causing obstruction

Discussion

In the present study, the participants were divided into two categories, such as patients with diabetes and kidney stones and patients with diabetes but non-kidney stone formers. It has been studied that there are various researches have carried out that associate the status of diabetes with body mass index and risk of kidney stone formation and showed that majority of diabetic patients belongs to the category of overweight and obesity whereas the majority of obesity has related to diabetic kidney stone formers. According to recent surveys, investigators have suggested that visceral adiposity is an important factor in developing insulin resistance in type II diabetic patients (Shulman GI 2000).

The cross-sectional study performed by Taylor, Stampfer, and Curhan It was concluded that diabetes mellitus plays a crucial and act as a risk factor for the development of kidney stones (Taylor EN, Stampfer MJ, Curhan GC 2005). Analysis by Daudon and his colleagues and reported that type II diabetes is more in the Uric acid kidney stone formers rather than calcium stones (Daudon M, Jungers P 2004). There is an increased risk of uric stones formation in the individual suffering from type II diabetes besides they are also at risk of containing such stones in general. The findings of the research which was carried out at Mayo Clinic have shown that patients with type II diabetes had produced 40% more stones of uric acid nature as compared to the non-diabetic patients (Robinson LE, van Soeren MH 2004). Regarding diabetes, the report by World Health Organization suggested that 9% of the world's population had diabetes in 2014. Additionally, 5 million deaths per year are caused by diabetes type II mostly from cardiovascular diseases (Taylor EN, Curhan GC 2008). Daudon, Traxer, Consort, Lacour, and Jungers reported that the risk of uric acid stones gets increased by diabetes. The researchers have found that type 2 diabetes mellitus, certain features of metabolic syndrome and the insulin resistance ultimately results in lesser pH of urine. The lower pH of urine is the core factor of uric acid stone production. The hypothesis study was, diabetes mellitus type 2 should contribute to the formation of uric acid stones (Daudon M, Traxer O, Conort P, Lacour B, Jungers P 2006). Daudon and Jungers related the nephrolithiasis and type 2 diabetes precisely in the form of uric acid nephrolithiasis.

According to the authors, patients who used to produce the uric acid stones contain the urine with low pH, which is the key factor of crystallization of uric acid. The formation of such acidic urine usually results from the insulin-resistant state which is the main characteristic of diabetes mellitus (Daudon M, Jungers P 2007). The major risk factor of hypertension and the incidence of diabetes mellitus is nephrolithiasis (Khan SR 2012). According to the results of previous literature, it has concluded that highest body mass index and insulin resistance of diabetic patients may contribute and cause lowering of the urinary pH and enhanced the ammioagenesis with which the uric acid stones can observe in such patients (American Diabetes Association. 2005). The formation of kidney stones gets prevented by altering dietary habits (Zeng G, Mai Z, Xia S, Wang Z, Zhang K, Wang L, Long Y, Ma J, Li Y, Wan SP, Wu W 2017). Kumar and Modi analyzed risk factors for uric acid nephrolithiasis in type II diabetes. The authors concluded that higher body mass index could additionally stress the risk. There is a need to confirm these outcomes by collecting extra data (Kumar KH, Modi KD 2011). The analysis of our present study revealed that 66 diabetic patients had shown the kidney stones while sonographic assessment.

Conclusion

The study shows that Diabetes Mellitus may act as a predisposing factor for the development of kidney stones in patients, or it can further lead to the progression and recurrence of stones specifically in diabetic patients between age 40-50 year. Though, additional studies are needed in order to investigate its contributing risk in the stone formers.

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Development of Life-Worldly Communication Scale for Older Persons: A Pilot Study

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Abstract
Objectives: Our prior study revealed that the speech duration of older people in long-term care facilities in Japan is four minutes in one day, owing to the lack of "life-worldly communications." This study is a pilot study for the development and validation of the Life-Worldly Communication Scale (LWCS) that can efficiently measure the life-worldly communication duration of older people. Methods: The subjects were 65 individuals, 65 years of age or older, who were chosen among people living in long-term care facilities and in home care in Japan. The items of LWCS were generated from related literature. The content validity of LWCS was examined from the content validity ratio. Construct validity of LWCS was verified by exploratory and confirmatory factor analyses. Convergent or discriminant validity was examined from the relation between LWCS and the life-worldly communication time or depression level. Reliability was examined by inspecting internal consistency and stability. Results: The LWCS proved satisfactory in the goodness-of-fit index (GFI = .92, NFI = .91, CFI = .99, RMSEA =.03) by confirmatory factor analysis. Convergent validity of LWCS was supported by a significant correlation between LWCS and the life-worldly communication time (r = .62, P <.001). Reliability of LWCS was confirmed by internal consistency (Cronbach's α =. 90) and stability (test-retest, r =.70, p <. 01). Conclusions: The reliability and validity of the LWCS were confirmed in the study population. However, the number of items included in each factor was insufficient. Efforts to improve LWCS are needed in the future.

Keywords: Pilot Study, Scale Development, Life-Worldly Communication, Reliability, Validity, Home Care, Nursing Home

1. Introduction

Previous studies on nursing communication with older persons have indicated that communication plays a highly significant role in construction, maintenance and development of relationships between older persons and caregivers (Balzer-Riley, 2012；Littlejohn & Foss, 2008). In particular, communication has a considerable influence on the quality of life (QOL) of older persons living under restricted conditions in long long-term care facilities for older people such as nursing homes (Levy-Storms, Claver, Gutierrez, & Curry, 2011; Wang & Liao, 2019); a lack of communication tends to have adverse effect on depressive states of older people in nursing home

(Boorsma, Joling, Dussel, Ribbe, Frijters &van Marwijk, et al., 2012; Canadian Institute for Health Information,2010; Pei, Yan, Wenjie, Qing & Xiuli, 2015).

However, nursing communication studies reported various problems with regard to how nurses and older people communicate with each other in actual nursing settings. For example, (1) no proper amount of communication is produced between them (Burgio, Allen-Burge, Roth, Bourgeois, Dijkstra, Gerstle, & Jackson, 2001; Norouzinia, Aghabarari, Shiri, Karimi, & Samami, 2016) ; (2) although nurses emphasize the importance of communication as an ideal, nurses' perceived priority for communication is extremely low in actual nursing scenes (McCabe, 2004; Shattell, 2004); (3) a large gap exists between them as to what they expect from communication: older adults expect to have a warm, empathic, sincere and encouraging mutual human connections with nurses, whereas nurses tend to treat older people solely as an object of nursing care and conduct only superficial communication (Bridges & Fuller, 2015; Nakrem, Vinsnes & Seim, 2011).

Despite such high expectations for communication from older adults, previous nursing communication studies paid only scarce attention to how much older people in long-term care facilities need communication, and also lacks the means to examine how and how much older persons contribute to communication, that is, patients' involvement and roles in communication (Caris-Verhallen, Kerkstra & Bensing, 1997; Fleischer, Berg, Zimmermann & Wüste, 2009).

Based upon the understanding of this insufficiency in previous nursing communication studies, we started our research first by aiming to clarify the quantity and characteristics of communication between older adults and care providers in long-term care facilities in Japan: we examined both the quantitative aspects of speaking time and frequency and the qualitative aspect of communication mechanisms. We found that there are two types of linguistic communication produced between nurses and older adults within a day (9 AM to 5 PM). One type of communication is the "task-oriented communication," which is communication between older persons and caregivers concerning various nursing and caregiver tasks, and the other type of communication the "life-worldly communication," which is communication-related to social and existential world for older persons as a human being who lives daily life. We also found that the task-oriented communication accounted for about 80% of the total communication time. The speaking time over one day for an older person in long-term care facilities was extremely little, at four minutes, with the older person's speaking time and frequency being higher with regard to life-worldly communication than to the task-oriented type of communication (Fukaya, Suzuki & Shitita, 2004).

We then investigated, using qualitative analysis method, the interactional functions of these two types of communication, and the following results were obtained. In the task-oriented communication, the nurse exerts control over what the patient should do (say) according to the goals regarding care tasks imposed on them, thereby giving older individuals little opportunity for spontaneous speech. The speech duration of older individuals, thus, markedly decreases in task-oriented communication. In contrast, In the life-worldly communication, older individuals are given opportunities for spontaneous talk by care providers who show sincere and encouraging interests in their stories, and thus the use of the life-worldly communication was found to be highly effective for increasing the amount and frequency of older people's speech (Fukaya, Kitamura, Koyama, Yamakuma & Sato, 2016).

Nevertheless, most nurses in long-term care facilities, because it does not seem to contribute directly to the resolution of health problems, tend to understand the life-worldly communication simply as idle and useless talk (Fukaya, Koyama, Kimura & Kitamura, 2009). The reason for this seems to be that nurse-patients, as well as doctor-patients communication, has been understood on the basis of the assumption that the relationship between healthcare providers and patients must be therapeutic, that is, a relationship strictly for the sake of solving a particular health problem, rather than a relationship between ordinary people (Moore & Kuipers, 1992; Moreira & Rodrigues, 1997; Roter & Larson, 2002).

The life-worldly communication needs to be understood as an inherently vital form of communication that contributes to the construction of a social and existential world for older adults as a human being. In other words, the life-worldly communication, which includes daily conversations and small talk, is crucial part of a process through which one confirms his/her significance as a social being, experiences various emotions, maintains mental

richness and stability, and satisfies essential human needs for interpersonal connections and mutual recognition (Coupland, 2003). The life-worldly communication also has the potential of contributing to the activation of the mind and quality of life of older adults, and a reduction of their feelings of loneliness and isolation. No reliable and valid method for measuring the life-worldly communication time, however, has been developed.

Most older people requiring care in Japan use either long-term care facilities, which provide medical, nursing and rehabilitation services according to the health status of older people, or home care services, which provide medical, nursing, and housekeeping services necessary for the older people at home. Long-term care facilities include medical sanatoriums (a facilities that provide services such as medical treatment and rehabilitation for the purpose of long-term treatment of chronic patients), and nursing homes (a facilities that provide long-term care for older people who have difficulty living at home). It is necessary, thus, to develop the "Life-worldly Communication Scale (LWCS)" that can easily measure life-worldly communication time of older people requiring a long-term care in various living environments. The development of the LWCS would also greatly contribute to the improvement and evaluation of caregivers' communication skills and also to the evaluation of quality of care facilities for older people.

2. Aims

The present study is a pilot study. A pilot study is defined as "a small study for helping to design a further confirmatory study" (Arnold et al. 2009), or "a version of the main study that is run in miniature to test whether the components of the main study can all work together" (Arain, Campbell, Cooper, & Lancaster, 2010). Thus, as a pilot study, this paper aims to design and to examine components of the main study that will develop and validate a scale for measuring the quantity of the life-worldly communication between older adults and care providers. More specifically, the present study aims:

a. to develop the Items of life-worldly communication (LWCS).
b. to examine, using a small set of data, the reliability and validity of the LWCS.

3. Methods

3.1. Item development

3.1.1. Item generation

The LWCS domains were constructed by reviewing the research literature concerning psychological and social communication of older adults in care facilities (Carpiac-Claver & Levy-Storms, 2007; Fleischer, et al., 2009), by examining the components of other communication scales for older person (Gremigni, Sommaruga & Peltenburg, 2008; Wang & Liao, 2019) and the elements that make up the life-worldly communication (Fukaya, et al., 2016). LWCS was hypothesized to have three domains: "topics of lifeworld," "spontaneity of older people," and "attentive attitude of caregivers." The item pool was developed to cover all three domains. The pool of items initially developed should be minimum twice as long as the desired final scale (Kline,2000; Schinka, Velicer, &Weiner, 2012). Twenty one items for LWCS were thus created in consideration of the burden on older people: twelve questions on "topics of life world" (past life experiences, meals, hobbies, etc.), four questions related to "spontaneity of older people" (activeness, desire to talk, hesitance, etc.), and five questions related to "attentive attitude of caregivers" (active listening, speech encouragement, etc.). The 21 items of LWCS were formatted as a self-report questionnaire with a four-point Likert scale assessing the frequency of life-worldly communication with consistent response options (from one: 'never to four: 'very much').

3.1.2. Expert panel and face and content validity

The domains and 21 question items of the LWCS were reviewed and refined by a panel of four nursing researchers and two sociologists familiar with geriatric nursing. The qualitative responses from the panel deemed LWCS to be valid for measuring life-worldly communication in clinical settings, indicating superficial validity. On whether each item evaluates the content of LWCS, each panel member also evaluated the overall fit of each item and the scale under the two options of "necessary" or "not necessary," providing detailed comments. Based on their evaluations, the content validity ratio (CVR) was calculated. The CVR of each item was 0.67 (three items) or 1.0 (18 items). In the case of six panel members, the CVR needs to be 0.99 or higher (Lawshe,1975), thus the three

items (CVR=0.67: Two items from "topics of life world"; One item from "attentive attitude of caregivers") were excluded and the 18 items were adopted as is shown in Table 1. Some phrases and words were modified based on the comments by the panel members.

Table 1. Items and Item analysis of the LWCS

			M	*SD*	Skewness	Item-total correlation
1. Topics of daily life						
1-1	Past life experiences	How much did you talk about your past work and life experiences?	.75	1.08	1.06	.66**
1-2	Meals	How much did you talk about your meals?	.95	1.07	.57	.68**
1-3	Hobbies	How much did you talk about your hobbies?	.14	.43	3.27	.21
1-4	Family topics	How much did you talk about your family or pet?	.94	1.13	.73	.76**
1-5	Friend/acquaintance	How much did you talk about your friends and acquaintances?	.74	1.09	1.14	.69**
1-6	Societal events	How much did you talk about the recent events? (TV, entertainment, politics, social issues)	.74	1.08	1.16	.68**
1-7	Affections	How much did you talk about your feelings? (Happy, sad, angry, etc.)	1.00	1.05	.51	.74**
1-8	Greetings	How much did you give and receive greetings? (Good morning, afternoon, evening, goodbye, etc.)	2.09	.95	-.76	.62**
1-9	Weather	How much did you talk about the weather and seasons?	1.15	1.12	.37	.67**
1-10	Affairs	How much did you talk about the daily affairs?	1.15	1.09	.35	.68**
2. Spontaneity of older people						
2-1	Activeness	How much did you engage first in conversation with caregiver?	1.48	1.02	.11	.69**
2-2	Desire to talk	How much did you talk to care giver about a topic that you want to discuss?	1.49	1.09	.11	.69**
2-3	Hesitance	How much did you talk to care giver about something that you were concerned about?	1.46	1.13	.07	.73**
2-4	Patients' perception of care providers	Do you think caregivers are always busy?	.90	.29	2.88	.41*
3. Communicational attitude of caregivers promoting the Type-2 utterance						
3-1	Active listening	When you talked with a caregiver, do you think they listened to what you were trying to say?	2.12	1.07	-.97	.64**
3-2	Speech encouragement	When you talked with a caregiver, do you think that they created an atmosphere that made it comfortable to talk?	1.85	1.15	-.46	.69**
3-3	Providing topics	Did caregiver initiate topics that you wanted to discuss?	1.37	1.10	.16	.69**
3-4	Attention to older people	Do you think caregiver were interested in your conversion?	1.82	1.13	-.43	.73**

Note. N=65 LWCS= Life-worldly communication scale.

3.2. Pre-study

LWCS was administered in six older participants to assess how easy the questions were understood and answered. From the feedback received, some revisions were made. The participants were also asked whether the number of questions was appropriate, and they responded that they did not feel overburdened.

3.3. Sampling

Older people in facilities were chosen from a medical sanatorium and a nursing home in Prefecture A, and older people requiring nursing care in communities were chosen among home care service users. The subjects were those who met the following selection criteria and gave consent to participate in the study. Prior to the research, its purpose and method were explained in writing and orally to the older people, and only those who consented to the study in writing participated in the research. We used the following selection criteria: (1) aged 65 years or older requiring nursing care, and (2) having the ability to give consent. The following were excluded: (1) Those who fall into level 3 or above in hearing impairment, (2) who fall into Class 3 of the impairment of voice/language function, both on "Grade table of handicapped failure" issued by *Koseirodosyo* (Japanese Ministry of Health, Labour and Welfare, 2008), (3) who are in an unstable physical condition, (4) who had moderate or severe level of dementia, i.e., who fall under 15 on the Hasegawa dementia scale (HDS-R) (Imai & Hasegawa, 1994).

The required sample size of a pilot study for a scale development is sufficient to be 30-40 (Hertzog.2008; Johanson & Brooks, 2010). Thus, 70 subjects were targeted in consideration of refusal rate and sample attrition rate. As a result, the participants were a total of 65 older persons, at three medical sanatoriums (17 participants), four nursing homes (24 participants), and in home care (24 participants).

3.4. Measures

3.4.1. Basic attributes of older persons

Researchers have used medical records to gather data on sex, age, FIM(Functional Independence Measure) (Gerrard, Goldstein, Divita, Ryan, Mix, & Niewczyk, et al., 2013), and degree of cognitive impairment (HDS-R) (Imai & Hasegawa, 1994). The reliability and validity of these scales (FIM and HDR-S) have been verified.

3.4.2. Life-worldly communication time

All of the communication that occurred between 65 survey participants and caregivers during one whole day (9 AM to 5 PM), was tape-recorded. Verbatim transcripts were created from the recorded contents of the communication, and were then classified into task-oriented and life-worldly communication using a "Types of communication between caregiver and older people" created and ascertained by our previous research (Fukaya, et al., 2004)(Table 2). According to the type of communication of older people, communication time was calculated by counting two Japanese letters written in the transcripts as one second.

Table 2. Types of communication between caregiver and older people

Type	Primary category	Secondary category	Actual examples
Task oriented communication	Promotion of behavior	Behavioral commands	Lift your leg. Stay here please.
		Behavioral entreaties	Here's your meal. Would you turn on your side.
		Confirmation of behavior completion	Have you drunk it? Have you finished rehab?
		Behavioral evaluation or praise	You did well. You stood up well.
	Assistance behavior	Explanation of assistance behavior	Let's look at your abdomen. I've come to take your temperature.

		Announcement of the start and end of assistance behavior	We'll move up. Yes, we're finished.
		Evaluation and understanding of assistance behavior	Are you sitting properly? Feeling more comfortable now?
	Questions and explanations about daily schedule and activities	Explanation and instruction of daily schedule	Today is rehab day. Now we're going to the bath.
		Question and evaluation of finished activities	Was rehabilitation tough? Have you finished your bath?
	Questions and explanations about physical condition	Questions on physical condition	Did you sleep well? Do you want to urinate?
		Explanations of physical condition	It's turned red. Your blood pressure is …
		Confirmation of symptoms	Does your head hurt? Is it itchy?
	Questions on wishes and desires	Questions about wishes and desires	Do you want some tea? Do you want to watch tv?
	Warning to be careful	Warning to be careful	The tea is hot! It's slippery, so be careful.
	Calling out	Calling out	Mr. / Mrs. (name)
	Others	Confirmation and acceptance of talk from residents	Is that so? Yes, I understand.
		Expressing feeling and emotion of caregivers	That's a problem. That makes me nervous.
		Soliloquizing	What shall I do? Let's do it. Let me see.
Life worldly communication	Greetings	Greetings	Good morning. I'm leaving now.
	Topics from resident's life history	Topics about the past life experiences	Talk about previous job. Talk about cooking best dishes.
		Talking about hobby or preference	Your hobby was ikebana, wasn't it? Do you like sushi?
		Talking about family, friends and pets	It's tough for your son. It was your grandchild yesterday?
	Topics on social and natural surroundings and events	Talking about social events and news	In yesterday's Sumo…It's the election soon.
		Talking about the season and the weather	It's cherry blossom season. It looks like it's about to snow.
	Topics on psychological state	Understanding and talking of psychological state	-- is a worry, isn't it. Today's a happy day isn't it.
	Others	Confirmation and acceptance of talk from residents	Yes, I understand how you feel.
		Expressing feeling and emotion of caregivers	I don't feel this is a big problem. Wow, that is wonderful.
		Soliloquizing	OK, now it's the hard part. How can I do it.

3.4.3. Depression

The Center for Epidemiological Studies Depression Scale (CES-D) (Radloff ,1977) was used as a scale to measure depression of the participants. CES-D has long been applied to various individuals, and its reliability and validity are verified (Shima, Shikano, Kitamura & Asai, 1985).

3.5. Ethical approval

Ethical approval was obtained from Tokai University's Ethics Review Committee (No. 12-26) and Kanto Gakuin University Committee for Ethics in Research Involving Human Subjects (H2014-2-4).

3.6. Data analysis

The item analyses were conducted as follows: a normality test, check of response skewness, check of correlations between items, and item–total correlation test for ensuring that only parsimonious, functional, and internally consistent item are ultimately included（Thurstone,1947; Boateng, Neilands, Frongillo, Melgar-Quiñonez, & Young, 2018）. Exploratory and confirmatory factor analyses were used to verify the construct validity. Exploratory factor analysis was conducted to extract domains of the LWCS. A further confirmatory factor analysis was performed to confirm the suitability of the hypothesized models. The reliability of the LWCS was assessed by (a) investigating the scale's internal consistency using Cronbach's alpha (a reliability coefficient) and (b) investigating its stability using the test-retest correlation coefficient. The convergent validity of the LWCS was examined from the correlation between the LWCS and life-worldly communication time. Discriminant validity was examined from the correlation analysis between the LWCS and CES-D. SPSS version 24 and Amos 23 were used for data analysis.

4. Results

4.1. Characteristics of study participants

The participants were 27 men (41.5%) and 38 women (58.5%). The average age was 84.00 years (*SD* = 6.61). Of the participants, 45 (69.2%) did not have dementia (HDSR score≧20), and 20 (30.8%) had mild dementia (16≦HDSR≦20). Meanwhile, 17 participants (26.2%) had depression (CES-D score≧16). Regarding ADL state, 23 participants (35.4%) were ambulatory, and 42 (64.6%) were wheelchair bound.

We examined the difference in the characteristics of older people, by comparing three types of residence groups. As a result, there was no significant difference between groups in age, sex, HDSR, and FIM. However, there were significant differences among the three groups of residence in the life-worldly communication time , CES-D、and LWCS.［Life-worldly communication time: $F(2,62) = 14.72$, $P<.000$, CES-D: $F(2,62) = 4.66$, $P<.05$, LWCS: $F(2,58) = 6.04$, $P<.01$］. Multiple comparisons with Bonferroni (5% level) showed the following results. Regarding life-worldly communication time: Home care (*M* = 3468.1, *SD* = 3703.3) > Nursing home (*M* = 378.9 sec; *SD* = 559.1) > Medical sanatorium (*M* = 161.4, *SD* = 196.8). Regarding CES-D: Nursing home (*M* = 14.79, *SD* = 10.26) > Medical sanatorium (*M* = 10.41, *SD* = 5.71) > Home care (*M* = 7.67, *SD* = 7.12). Regarding LWCS: Home care (*M* = 14.45, *SD* = 7.04) > Nursing home (*M* = 8.67, *SD* = 4.99) or Medical sanatorium (*M* = 8.47, *SD* = 6.64, see Table3).

Table3. Characteristics of study participants by residences

				95% Cl			
		n	*M(SD)*	LL	UL	*F*	*p*
Age	Medical sanatorium	17	83.06(8.25)	78.82	87.30	1.32	
	Nursing home	24	85.78(6.37)	83.03	88.54		
	Home care	24	82.96(5.36)	80.69	85.22		
	Total	65	84.00(6.61)	82.35	85.65		
HDSR	Medical sanatorium	17	23.47(3.76)	21.54	25.40	0.84	
	Nursing home	24	20.63(7.72)	17.36	23.89		
	Home care	24	21.48(7.97)	18.03	24.92		
	Total	65	21.69(6.99)	19.94	23.43		

FIM	Medical sanatorium	17	73.88(28.33)	59.32	88.45	0.11	
	Nursing home	24	78.79(22.54)	69.27	88.31		
	Home care	24	77.54(21.83)	68.32	86.76		
	Total	65	77.05(23.63)	71.19	82.90		
CESD	Medical sanatorium	17	10.41(5.71)	7.47	13.35	4.66	**
	Nursing home	24	14.79(10.26)	10.46	19.12		
	Home care	24	7.67(7.12)	4.66	10.67		
	Total	65	11.02(8.59)	8.89	13.14		
Life-worldly communication time	Medical sanatorium	17	161.4(196.8)	60.19	262.51	14.72	***
	Nursing home	24	378.9(559.1)	142.82	615.02		
	Home care	24	3468.1(3703.3)	1904.37	5031.88		
	Total	65	1462.65(2729.28)	786.36	2138.93		
Task oriented communication time	Medical sanatorium	17	252.2(329.8)	82.65	421.76	1.81	
	Nursing home	24	588.7(557.6)	353.24	824.18		
	Home care	24	882.8(1599.3)	207.39	1558.19		
	Total	65	609.28(1058.50)	347.00	871.57		
LWCS	Medical sanatorium	17	8.47(6.64)	5.05	11.89	6.04	**
	Nursing home	24	8.67(4.99)	6.56	10.77		
	Home care	24	14.45(7.04)	14.45	7.04		
	Total	65	10.51(6.69)	8.79	12.22		

Note. ***= p<.001. **= p<.01. *= p<.05. LWCS= Life-worldly communication scale.

4.2. Item reduction analysis

The results of item analysis based on responses from 65 people to each question are shown in Table 2. The bias in distribution of responses of each question item was examined with the floor effect (<0 = mean value-SD) or the ceiling effect (>3 = mean value + SD), and with response skewness. As the floor effect was found in four items, namely, “past life experiences,” “hobbies,” “friend/acquaintance,” and “societal events,” and the ceiling effect was found in two items, namely, “greetings” and “patients’ perception of care providers,” a total of six items were excluded.

A cross-correlation analysis of the question items was performed to check their discriminatory power. Two questions (“hesitance” and “active listening”) were excluded because a high correlation was found both between the items (“desire to talk” and “hesitance”) (r = 0.75, p <0.01) and between the items (“speech encouragement” and “active listening”) (r = 0.74, p <0.01). An item-total correlation test was conducted to check the correlation between each item and the total score of 10 items. Item-total correlation > .03 is required (Cristobal, Flavian, & Guinaliu, 2007), and as a result, all 10 items showed a significant correlation greater than r =.62.

4.3. Construct validity

4.3.1. Extraction of factors

Domains of LWCS were extracted by factor analysis with the Promax rotation of the likelihood method (Table 4). Kaiser-Meyer-Olkin (KMO) and Bartlett’s tests were conducted to examine the suitability of samples. As the KMO value was .86, and Bartlett’s tests of sphericity reached statistical significance (p<*.000*), it was judged that this sample met the criteria for factor analysis (Taherdoost, Sahibuddin & Jalaliyoon, 2014). The total variance explained by LWCS showed two common factors with an eigenvalue greater than 1.0. Initial eigenvalues were 5.20 for factor 1, and 1.21 for factor 2. The cumulative proportion of these two factors after Promax rotation was 56.26%.

The two common factors were named based on the interpretation of the meaning of the question items contained in each factor. Factor 1 (items 2-2, 1-9, 2-1, 1-6, 1-3, 1-2, and 1-8: 47.20% variance explained) measured "topics desired by older people." Factor 2 (items 3-2, 3-3 and 3-4: 9.06% variance explained) measured "speech encouragement by the staff." Although factor 2 ("speech encouragement by the staff") was not very high in the contribution rate, it was important because it was supposed to be an element that encourages older people to talk.

Table 4. Factor loading for Exploratory factor analysis with Promax rotation of LWCS

	Component	
Scale	1	2
LWCS2-2 Desire to talk	0.84	-0.04
LWCS1-9 Affairs	0.82	-0.09
LWCS2-1 Activeness	0.71	-0.04
LWCS1-6 Affections	0.65	0.10
LWCS1-3 Family	0.62	0.19
LWCS1-2 Meals	0.59	0.10
LWCS1-8 Weather	0.40	0.24
LWCS3-4 Attention to the elderly	-0.08	0.97
LWCS3-3 Providing topics	0.08	0.72
LWCS3-2 Speech encouragement	0.05	0.71
Eigenvalue	5.20	1.21
Cumulative proportion of variance explained	47.20	56.26
Kaiser-Meyer-Olkin (KMO)	0.86	
Bartlett's test of sphericity $\chi 2$=325.51 df=45 Sig=0.000		

Note. N=65. Extraction Method = Likelihood Method. Rotation Method = promax with Kaiser Normalization. LWCS = Life-Worldly Communication Scale

4.3.2. Test of dimensionality

The result of an exploratory factor analysis showed that the factor load of item 1-9 "weather" was lower than that of other items, resulting in the interim LWCS having nine items. The construct validity of LWCS was examined by a confirmatory factor analysis for the two-domain model ("topics desired by older people" and "speech encouragement by the staff") extracted by the exploratory factor analysis. However, its goodness of fit (GFI =. 97, NFI =. 89, CFI =. 89, RMSEA =. 08) was slightly insufficient.

Therefore, as shown in Figure1, the confirmatory factor analysis was performed the assumed three-domain model ("topics of life world," "spontaneity of older people," and "attentive attitude of caregivers"). As a result, the goodness-of-fit index showed sufficient values (GFI =. 92, NFI =. 91, CFI =. 99, RMSEA =. 03). The standardized factor loadings of paths from three factors to each item were all highly significant ($p < .001$), ranging from .68 to .93, and a significant covariance relation among three factors ranging from .57 to .81 ($p < .001$) was also found. However, in this model, only two items were included in the latent factors for "spontaneity of older people."

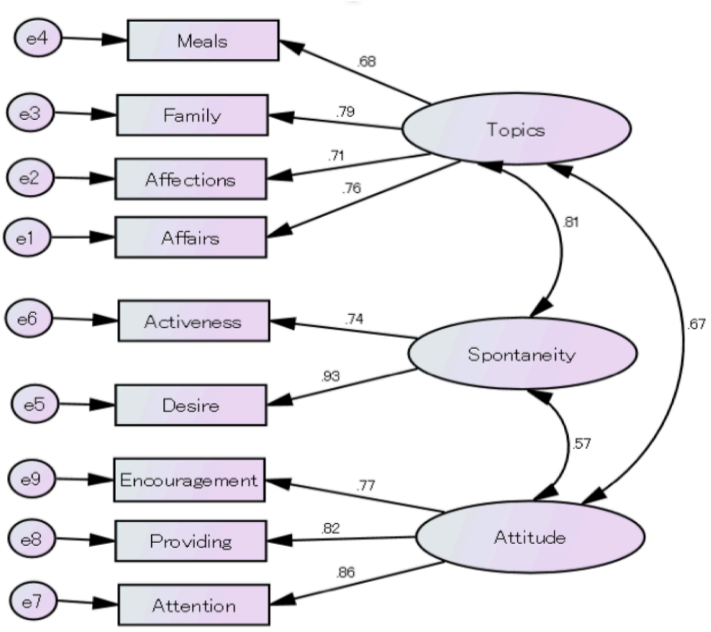

Figure1.
Result of Confirmatory Factor Analysis of LWCS(Standardized esimate)
GFI=.92 NFI=.91 CFI=.99 RMSEA=.03

4.4. Convergent validity

The convergent validity of LWCS was examined from the relation between life-worldly communication time and LWCS. The relevance between LWCS and life-worldly communication time as actual measurement value was the most important to prove the convergent validity of LWCS. A significant correlation was found between LWCS and life-worldly communication time (r =. 62, p <.001).

The relation between LWCS and life-world communication time was analyzed by residences. There was no significant association with r =.42 (p = 0.07) in a medical sanatorium, but there was a significant moderate correlation between the LWCS and life-worldly communication time in a nursing home and in home care. (Table 5).

Table 5. LWCS Convergent validity and Discriminant validity

Investigation Item	n	LWCS	
		Pearson's correlation coefficient	*p*
Life-worldly communication time Total	65	0.62	***
Medical sanatorium	17	0.45	0.07
Nursing home	24	0.62	***
Home care	24	0.60	**
CES-D	65	-0.30	*

Note. ***= p<.001. **=p<.01. *= p<.05

CES-D= Center for Epidemiologic Studies Depression Scale. LWCS= Life-worldly communication scale.

4.5. Discriminant validity

The discriminant validity of LWCS was examined from the relation between LWCS and CES-D. There was also a significant inverse correlation between LWCS and CES-D (r = -.30, p <.05, see Table 5).

4.6. Test of reliability

To investigate the reliability of LWCS, Cronbach's alpha reliability coefficient was used to check the scale's internal consistency, and the test-retest correlation coefficient to analyze its stability. The nine question items had a Cronbach's alpha of .90. The reproducibility of each item was ascertained by the correlation between test-retest. Using a three-week interval between test and retest, we obtained a result of r =.70 (p <.01), indicating the acceptable level of stability.

5. Discussion

5.1. Construct validity

The construct validity of the LWCS was verified by a confirmatory factor analysis. When developing a scale, at least three or more items are required for a factor, given that a factor containing only two items will be defined by only a single correlation (MacCallum, Keith, Zhang & Hong, 1999). The originally presumed three-factor model had a strong goodness of fit, but the number of items included in the latent factors (spontaneity of older people) did not reach the required three items. One of the reasons for this outcome was the lack of the number of items prepared. LWCS was found to have minimum required items (about twice as much as the final scale) (Kyriazos & Stalikas, 2018) while it is also pointed out that required number of items should be 3 to 4 times more than the final scale (DeVellis, 2012; Streiner, Norman, & Cairney, 2015). Therefore, the construct validity is necessary to reexamine it by increasing the number of items in the future.

The paths from "topics of daily life" showed significantly high factor loadings to "meals," "family," "affections," and "affairs" (r≧.68, p <.001). The research conducted by *Naikakufu* (Cabinet Office of Japan; 2014) revealed that the daily pleasures of older people, in descending order, are as follows: TV/radio, newspapers, chatting, travel, and being with family at home. Among the four items constituting "topics of daily life," three items, excluding "affections," are among these daily pleasures of older people, and thus are considered to be the topics, or objects, that are of a high level of interest and concern to them. However, further discussion is necessary whether the topics preferred by older people differ depending on the culture in which older people and care providers live in and communicate with each other.

5.2. Convergent validity

Convergent validity is the extent to which a construct measured in different ways yields similar results (Boateng, et al., 2018). The convergent validity of the LWCS was further examined from the relation between the LWCS and the measured values of the life-worldly communication time. The main purpose of this scale was to measure easily and efficiently the life-worldly speech duration of older adults. The most important aspect of validation is the process of communicating the impact of the measured attributes on the test score, rather than the relationship between the measured attributes and other attributes (Borsboom, Mellenbergh & van Heerden, 2004).

A significant moderate correlation of r =. 62 (p <.001) was found between the LWCS and life-worldly speech duration in older adults. In addition, there was a significant difference in life-worldly communication time (home care > nursing home > medical sanatorium) by residence, and LWCS also showed a significant difference among the three groups of residence. These results indicate that the measured values of life-worldly speech duration were reflected onto the LWCS to a considerable extent, suggesting a sufficient convergent validity of LWCS. Since the representativeness of the survey subjects is not guaranteed in this study, it is necessary to obtain more samples from each residence in the main study.

5.3. Discriminant validity

The discriminant validity of LWCS was examined in terms of association between LWCS and CES-D, and there was a slightly significant negative correlation (r = -.30, p <.05). It is reported that the lack of reliable and intimate relationships between older people and care providers in facilities, tend to increase the rate of depression（ Mechakra-Tahiri,2009; Østbye, et al., 2004）and that the lack of meaningful and constructive communication tends to promote the sense of loneliness and depression（Theurer, Mortenson, Stone, Suto, Timonen, & Rozanova, 2015). Thus, the weak negative correlation found between LWCS and CES-D is considered to be due to the fact that daily lack of life-worldly communication can affect depressive states.

5.4. Reliability

We examined the reliability of LWCS based on internal consistency among scale items and the reproducibility (stability) of the scale. Internal consistency, as measured by Cronbach's α, was .90 for nine items, showing sufficient consistency（DeVellis, 2012；Kline, 2000）.

Reproducibility, as tested by test-retest, was r =.70 (p <.01). Regarding the validity of the test-retest reliability coefficient, in the case of academic research, its reliability coefficient is sufficient if it ranges between r = .70 and r = .80 (Kaplan,2005). Therefore, this scale was found to have an acceptable level of stability.

5.5. Limitations

The limitations of this study are the issues with the method of sampling and the number of samples. The samples in this study were extracted by non-random sampling. Therefore, there is a possibility that the sample may be biased. Regarding the sample size for factor analysis, it is recommended that the number of samples should be at least 100(Gorsuch,1992) to avoid bias and statistical risks. Therefore, it is necessary to examine the validity of larger samples in the future.

6. Conclusions

LWCS resulted in a "9 items-3 domains" model（" topics of life world," "spontaneity of older people," and "attentive attitude of caregivers"), which was supported by the CFA (GFI =. 92, NFI =. 91, CFI =. 99, RMSEA =. 03). However, the number of items included in each factor was insufficient. Convergent validity of LWCS was supported by a significant correlation between LWCS and the life-worldly communication time (r = .62, P <.001). Communication time and LWCS were significantly higher in home care than long-term care facilities, and communication time was reflected in LWCS. Reliability of LWCS was confirmed by internal consistency (Cronbach's α =. 89) and stability (test retest, r =.70, p <. 01). The reliability and validity of the provisional LWCS in this study indicates the feasibility of future full-scale development studies.

7. Conflict of Interest

The author(s) declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Profile of Stillbirth in a Referral Center in the Niger Delta Region of Nigeria

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Abstract
Background: The rate of stillbirth in developing countries of Sub-Saharan Africa and South Asia remains a far cry from the rate of 12 per 1000 deliveries recommended by the United Nations. This tragedy results largely from inadequate maternity care services or failure to utilize available services in affected countries. Objectives: The aim of this study was to determine the stillbirth rate in the study center and to assess factors that were associated with the delivery of a stillborn infant. Method: This study was a retrospective descriptive study where mothers who had stillbirth were identified for in depth study of their clinical records. Results: The stillbirth rate was 67.5 per 1000 deliveries in the study center during the period under review. The majority (39.7%) of the mothers were aged 26 – 30 years, and more than half (54.7%) were multiparous. Over half (58.5%) of the deliveries were delivered at term and 46.4% of the mothers were un-booked. A vast majority (63.0%) of the infants were normal weight, while 54.6% were males. Macerated stillbirth accounted for 55.7% of the stillbirths. Multiparous women and women who delivered un-booked significantly had stillbirths ($p = 0.000$). Conclusion: The stillbirth rate in the study center was very high and this was commoner among multiparous women and women who did not receive antenatal care during pregnancy.

Keywords: Stillbirth, Antenatal Care, Associated Factors, Referral Center, Nigeria

Introduction

Human development and expansion in medical knowledge have made their contributions to safe motherhood. This is essential because every pregnant woman desires to be delivered of a healthy infant at the end of her pregnancy. Antenatal care has the major objective of ensuring optimal health outcomes for the mother and her baby(Statistics, 1977). When properly designed and executed, antenatal care helps to monitor the pregnancy and reduce morbidity risks for the mother and the child during pregnancy and delivery (Statistics, 1977; Goldenberg and McClure, 2018). Even though, prevention of stillbirth is not identified as a primary goal of antenatal care, it does help to reduce the

incidence of stillbirth, as less frequent visits, especially in the third trimester of pregnancy has been shown to be associated with a higher risk of stillbirths (Olusanya and Solanke, 2009; Goldenberg and McClure, 2018).

The huge burden of stillbirths, which is put at 3.2 million pregnancies per year globally is borne mainly by developing countries, where antenatal care is largely inadequate (Olusanya and Solanke, 2009; Suleiman, Ibrahim and Abdulkarim, 2015; Wolde *et al.*, 2018). Sub-Saharan Africa where Nigeria is situated and South Asia have the largest incidence of stillbirths, and about a third of such adverse pregnancy outcome occur intra-partum (Olusanya and Solanke, 2009; Suleiman, Ibrahim and Abdulkarim, 2015; Wolde *et al.*, 2018). Stillbirths occurring intra-partum are often a reflection of inadequate antenatal care and or suboptimal supervision of labor and delivery (Goldenberg, McClure and Bann, 2007).

Perinatal mortality, which comprises stillbirths and neonatal deaths occurring within the first week of life is an index of assessing the quality of obstetric and neonatal care in a maternity unit (Joy E Lawn, Simon Cousens, Jelka Zupan, 2005; Goldenberg, McClure and Bann, 2007; Olusanya and Solanke, 2009). This as expected is disproportionately high in developing countries owing to underutilization of antenatal care services and suboptimal quality of intra-partum (Joy E Lawn, Simon Cousens, Jelka Zupan, 2005; WHO, 2006).

A double- prong approach of holistic antenatal care and vigilant intra-partum care are desirable for effective prevention of stillbirths (Di Mario, Say and Lincetto, 2007; Ezugwu *et al.*, 2011; Goldenberg and McClure, 2018). Antenatal care, tailored to make provision for more frequent visits after the 36weeks of gestation has been found to be associated with less incidence of stillbirths (Di Mario, Say and Lincetto, 2007; Ezugwu *et al.*, 2011; Vogel *et al.*, 2013; Goldenberg and McClure, 2018). Similarly, confinement in an accredited health facility where skilled maternity care attendants are available is essential for the reduction of stillbirths that occur during the intra-partum period (Tayelgn, Zegeye and Kebede, 2011; Hailemichael, Woldie and Tafese, 2013; Ballard *et al.*, 2016; Kayode *et al.*, 2016).

Even though, several advocacies have been made for the reduction of the incidence of stillbirths across the world, stillbirths continue to occur due to suboptimal maternity care, prevalent especially in Sub-Saharan Africa and South Asia (Mullan and Horton, 2011; Kayode *et al.*, 2016). This obnoxious adverse pregnancy outcome continues to occur in countries of the world where socio-economic deprivations and inadequate health care resources are prevalent. Stillbirth brings in its wake a sense of loss and grief to expectant parents and by extension the family, which may have prepared with joy to welcome a new entrant into the family (Samuelsson, Rådestad and Segesten, 2011). Stillbirth might therefore be a source of grief and sorrow, which if unchecked could result in long term psychological problems for the parents (Trulsson and Rådestad, 2004; Samuelsson, Rådestad and Segesten, 2011).

Considering the clinical importance of stillbirth, it is desirable to prevent its occurrence (Lavin and Pattinson, 2018). In spite of many calls for efforts to eliminate stillbirths across the world, the occurrence of stillbirth in maternity units in Nigeria does not seem to abate (Bhutta *et al.*, 2011; Pattinson *et al.*, 2011). This study was therefore designed to assess the incidence of stillbirth in the study center during the period under review, as well as to identify factors that were associated with the delivery of a stillborn infant. Findings of this study would help the study center to appraise its performance against the backdrop of the need to consider lowering the stillbirth rate to an acceptable level.

Method

This was a retrospective study of stillbirths in the Maternity unit of the University of Uyo Teaching Hospital over a six year period from 1st January 2012 to 31st December 2017. Approval to conduct the study was obtained from the Ethical Committee of the University of Uyo Teaching Hospital.

The University of Uyo Teaching Hospital is located in Uyo, the state capital of Akwa Ibom State, which is situated in the Niger Delta region of Nigeria. The Niger Delta region of Nigeria is located in the South – east health zone of the country. It is the only health facility providing tertiary level health care in the state. The inhabitants of Uyo are mainly the Ibibios, the Annangs and the Oro people of the state. There are a minority of other Nigerian tribes like the Efiks, the Igbos, the Yorubas and the Hausas. Most inhabitants of Uyo are business people, public servants

and professionals. Other inhabitants are artisans, traders, farmers, students and the unemployed. Akwa Ibom state has an estimated population of 5.5 million people (Saleem *et al.*, 2018).

Data collection and analysis

The delivery register in the labor ward for the period under review was retrieved for analysis. All mothers who delivered stillborn infants between 1st January 2012 and 31st December 2017 were identified. The clinical folders of such mothers were retrieved from the records unit of the hospital for in depth study. Information such as demographic characteristics, obstetric parameters, mode of delivery and neonatal outcome were extracted using a pro forma. Information obtained are expressed in Arabic numerals, simple proportions, percentages and frequencies.

Stillbirth was defined as the delivery of an infant without any sign of life, occurring at and after the 28 weeks of gestation, irrespective of the mode of delivery. Only stillborn singletons were included in the computation of the stillbirth rate.

The minimum sample size was determined using the Kish Leslie formula recommended for cross sectional studies and the minimum sample size of 96.72 subjects was obtained. The study population exceeded the minimum sample size in order to improve the reliability of results obtained from the study. Missing data were negligible.

The results are presented in tables and a pie chart. Data obtained were analyzed with descriptive statistics. The Chi-square test was used to assess for any association between categorical variables. Statistical significance in the differences between selected maternal, obstetric and neonatal parameters and incidence of stillbirth were considered at a p- value of less than 0.05.

Results

During the six years period of the study, 11,886 mothers delivered 12,243 babies. Out of this number, 853 babies were delivered stillborn by 831 mothers. There were 801 singletons, 23 twins and 2 triplets. This gave a stillbirth rate of 67.5 per 1000 deliveries in the study center during the period under review, excluding the twins and triplets. Table 1 shows the socio-demographic parameters of mothers in the study population. The majority (39.7 %) of the mothers were young women, who belonged to the age range of 26 to 30 years and more than half (54.7 %) of the mothers were multiparous women. Among all deliveries, 58.5 % of the women were delivered at term. Nearly half (46.4 %) of the mothers were un-booked. Obstetric parameters and characteristics of the fetus are presented in table 2. The majority (49.9 %) of the infants were delivered vaginally as against caesarean delivery, which contributed 39.9 % of all the deliveries. A vast majority (63.0 %) of the infants were normal weight with male infants contributing 54.6 % to the total number of stillborn infants recorded. Table 3 shows the computation of association between obstetric parameters and neonatal outcome with regard to whether it was fresh stillbirth (44.3%) or macerated stillbirth. There was a highly statistically significant difference in the prevalence of macerated stillbirth among mothers who were delivered vaginally, when compared to those who were delivered through caesarean section, p= 0.000. Multiparity (p= 0.027) and un-booked status (0.024) of the mothers had significant association with prevalence of stillbirth in the study population.

Table 1: Socio-demographic characteristics of mothers who had stillbirth in the study Center

Characteristics	Frequency	Percentage
Age		
≤ 20	76	9.2
21-25	198	24.0
26-30	328	39.7
31-35	158	19.1
36-40	64	7.8

> 40	2	0.2
Parity		
0	40	4.9
1	248	30.0
2-4	452	54.7
5-7	75	9.1
>7	11	1.3
Booking Status		
Booked	338	40.9
Un-booked	383	46.4
Referred	78	9.4
Defaulted	27	3.3
Gestational Age (Weeks)		
28-33	167	20.2
34-36	145	17.5
37-42	483	58.5
>42	31	3.8
Total	826	100.0

Table 2: Obstetric parameters and characteristics of the fetus in the study population

Characteristics	Frequency	Percent
Fetal Presentation		
Cephalic	702	82.3
Breech	112	13.1
Abnormal fetal lie	39	4.6
Delivery Mode		
Vaginal	412	49.9
Abdominal	330	39.9
Operative vaginal delivery	84	10.2
Pregnancy Type		
Singleton	801	97.0
Twins	23	2.8
Triplets	2	0.2
Sex of neonate		
Male	466	54.6
Female	387	45.4
State of the Neonate		
Fresh Still Birth	378	44.3
Macerated Still Birth	475	55.7
Birth Weight		
<1Kg	8	0.9
1-1.5kg	86	10.1
1.6-2.4kg	160	18.7
2.5-4.0kg	537	63.0
>4 kg	62	7.3
Total	853	100.0

Table 3: Association between obstetric parameters and neonatal outcome in the study population

Characteristics	Neonatal outcome			Test statistic
	[α]FSB	[¥]MSB	Total	
Age group (in years)				X^2= 0.0901
Less than 35	316 (86.24)	396 (86.20)	712	P= 0.764
35 and above	52 (13.76)	62 (13.80)	114	
Delivery Mode				X^2= 17.787
Vaginal	196 (51.85)	314 (66.11)	510	P= 0.000
Abdominal	182 (48.15)	161 (33.89)	343	
Parity				X^2= 4.878
0-4	309 (84.39)	408 (86.80)	744	P= 0.027
≥5	59 (15.61)	50 (13.20)	109	
Sex of neonate				
Male	204 (53.97)	262 (55.16)	466	X^2= 0.1202
Female	174 (46.03)	213 (44.84)	387	P= 0.729
Birth weight				
< 1 kg	2 (0.53)	6 (1.26)	8	X^2= 1.598
1-1.5kg	39(10.32)	47 (9.89)	86	P= 0.809
1.6-2.4kg	68 (17.99)	92 (19.37)	160	
2.5-4kg	242 (64.02)	295 (62.11)	537	
>4kg	27 (7.14)	35 (7.37)	62	
Booking Status				
Booked	145 (39.15)	194 (42.95)	339	X^2=9.406
Un-booked	189 (51.59)	194 (42.53)	383	P=0.024
Referred	25 (6.61)	52 (10.95)	77	
Booked but defaulted	10 (2.65)	17 (3.58)	27	
*GA (in weeks)				
28-33	73 (19.31)	94 (19.79)	167	X^2= 6.363
34-36	65 (17.20)	80 (16.84)	145	P= 0.095
37-42	221 (61.64)	262 (58.32)	483	
>42	7 (1.85)	24 (5.05)	31	

*GA stands for gestational age.
[α]FSB stands for fresh stillbirth.
[¥]MSB stands for macerated stillbirth.

Discussion

The prevalence of high stillbirth rates in developing countries of the world are due largely to inadequate maternity care. This malady is often associated with a sense of grief to affected families and a negative impression of modern maternity care in affected centers. The stillbirth rate of 67.5 per 1000 deliveries obtained in this study was much higher than the rate of 25 per 1000 deliveries recognized for low income and middle-income countries (Saleem *et al.*, 2018). This rate is also a far cry from the stillbirth rate of 12 per 1000 deliveries recommended by the United Nations' Every Newborn Action Plan, which has set this goal to be attained in 2030 by all countries (Akombi *et al.*, 2018; Saleem *et al.*, 2018). The stillbirth rate of this study in Uyo, South-east health zone of Nigeria is comparable to the rate of 74 per 1000 deliveries that was obtained in Enugu, South-east Nigeria, probably because both study centers in Nigeria belong to the same health zone. In contrast, an Ethiopian study recorded an impressive low stillbirth rate of 21.8 per 1000 deliveries in a survey across health centers, hospitals and homes (Vogel *et al.*, 2013). The low stillbirth rate recorded in Ethiopia may have been influenced by the method used for the rural community- based questionnaire-centered survey, which lasted for only 8 months and enquiry about stillbirths

covered only the preceding 12 months (Vogel *et al.*, 2013). The majority (58.5%) of the stillborn infants in this study were delivered at term with 46.4% of the mothers being un-booked as against a slightly higher term stillbirth rate of 66.8% recorded in Lagos, South- west Nigeria and a much lower rate of 2.8% among un-booked mothers (Olusanya and Solanke, 2009; Vogel *et al.*, 2013). The majority (49.9%) of women in this study population were delivered vaginally, with 63.0% of infants having normal birth weight and 54.6% being male infants. This was different from the situation in South Africa, where stillbirths were found to decline after 31weeks of gestation and peaked at 38wks. However, in the South African study, analysis based on sex of infants who were stillborn was not computed, even though the study design was an audit where the role of antenatal care in the prevention of stillbirth rate in the country was being investigated (Lavin and Pattinson, 2018). The proportion of fresh stillbirths suggesting intra-partum implication in their occurrence was 44.3% as against 55.7% of macerated stillbirth in this study. Although this retrospective study could not evaluate the proportion of stillbirth that occurred intra-partum, the result contrasted sharply with the results from Lagos, South-west Nigeria, where macerated stillborn infants contributed a mere 1.4% to the stillbirth rate in that study (Olusanya and Solanke, 2009). The higher population of macerated stillbirth rate in this study is a reflection of inadequate antenatal care as shown by the large proportion of un-booked mothers in the study population (Olusanya and Solanke, 2009). Macerated stillbirth rate tends to increase in most referral maternity centers as a result of the pooling together of hitherto poorly managed and complicated cases to such centers from lower levels of maternity care in the health care system. Where referrals within the healthcare system are not appropriately utilized as is obtained in Georgia where referrals to primary care providers are low, the effectiveness of that healthcare system could be reduced (Verulava *et al.*, 2019). Notwithstanding, an institutional based study in Enugu, South-east Nigeria had recorded 47.7% of macerated stillbirth as against a fresh stillbirth rate of 52.3% (Goldenberg, McClure and Belizán, 2009; Ezugwu *et al.*, 2011). Complications of pregnancy resulting in intrauterine fetal demise and macerated stillbirth have been elaborately studied (Olusanya and Solanke, 2009; Ezugwu *et al.*, 2011; Kayode *et al.*, 2016; Akombi *et al.*, 2018; Kaiser, 2018). A vast majority (66.11%) of the macerated stillborn infants were significantly (p= 0. 000) delivered vaginally, suggesting there were no contraindications to vaginal delivery, but a great proportion (57.1%) of the mothers did not receive antenatal care in the center. Multiparity and un-booked status of the mothers were significantly associated with stillbirth. The preponderance of stillbirths among multiparous women in the study is probably a reflection of their high proportion in the study population, rather than as an independent risk factor. The association of stillbirth with women who failed to receive antenatal care was similar to what was obtained from other studies (Ezugwu *et al.*, 2011; Vogel *et al.*, 2013). In the Enugu, South-east Nigerian study, the odds of an un-booked mother being delivered of a stillborn infant was 1.56, p = 0.04, whereas parity was not significantly associated with the odds of stillbirth occurring (Ezugwu *et al.*, 2011). On the other hand, a community based survey of 3 East African countries found, low level of education, advanced maternal age, smoking and drinking, as well as non-availability of potable water as risk factors that predisposed mothers to have stillbirth in that study (Akombi *et al.*, 2018). Notwithstanding the preponderance of stillbirths among mothers with those risk factors, these may have confounded with their socioeconomic circumstance, which could have undermined their ability to receive quality antenatal care. The application of the results of this study is limited by the fact that it is essentially a review, and findings may not have a global implication.

In conclusion, stillbirth rate in the study center was 67.5 per 1000 deliveries. Stillbirth was more common in young multiparous women, who were delivered at term vaginally of normal weight male stillborn infants. The majority of the stillborn infants were macerated and delivered by mothers who did not receive antenatal care. The reduction of the high prevalence of stillbirth in our maternity care system would require a multidisciplinary approach involving the education and public enlightenment of women to see the need to book and receive regular antenatal care in pregnancy in order to provide an opportunity for identification of risk factors for intrauterine fetal death for possible intervention. Efforts should also be made to ensure vigilant intra-partum care for all pregnant women in labor in Nigeria. Following the publication of this research, findings shall be sent to the Nigerian Federal Ministry of Health to advocate for improved maternity care, starting from Traditional Birth Attendants centers, through general hospitals to specialist hospitals across the South- east health zone of the country. Such a strategy has the potential to reduce the prevalent unacceptably high stillbirth rates in the South- east zone of the country.

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Determination of Sonographic Concerning Signs Leading to Abortion

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Abstract
Background: Pregnancy is considered as an important period in the women's life. Not only environmental health condition influences the life quality of the mothers, but may also effects the fetus and cause hereditary disease. Millions of women do not have access to proper health services in future worldwide. The mains purpose of the rural pregnant women protection program is maintaining health and furnishing during the course of pregnancy by protecting the mother and fetus. The aim of the study here is to determine the sonographic signs leading to abortion. Objective: Determination of sonographic concerning signs leading to abortion. Methodology: HONDA HS2600 and HONDA GE p7 of 2.8-3.5 MHz Convex probe is used. AIUM procedures for obs and gyne are followed for the scanning procedures. The study was conducted at Indus Hospital, Manawan. Data of 60 patients was collected through convenient sampling. Statistical software for social sciences (SPSS version 22.0) is used for the analysis of data. Results: Out of 54 patients, 38 patients had vaginal bleeding and 16 patients came out without vaginal bleeding. In table 3, sonographic findings of the patients were illustrated. As the data was collected of 54 patients, among these, 11 patients (20.4%) had blighted ovum, 1 patient (1.9%) had CRL with negative FCA, 5 patients (9.3%) had haematoma, 3 patients (5.6) had fetal hydrops, 1 patient (1.9) had irregular low lying placenta, 19 patients (35.2%) had missed abortion. 6 patients (11.1%) had open internal os, 1 patient (1.9%) had previa type 3, 1 (1.9%) had previa type 1. 2 patients (3.7%) had recurrent abortion. 1 patient (1.9%) had scalping of bones and 3(5.6%) had scanty liquor. Conclusion: There are multiple sonographic concerning signs but missed abortion and blighted ovum were the most common amongst them.

Keywords: Spontaneous Abortion, Gravidity, Ultrasonography, Missed Abortion

Introduction

Spontaneous abortion is the most common complication of early pregnancy. Spontaneous abortion, or miscarriage, is defined as a clinically recognized pregnancy loss before the 20th week of gestation (Regan and Rai, 2000). The frequency decreases with increasing gestational age. The incidence of spontaneous abortion (miscarriage) in clinically recognized pregnancies up to 20 gestational weeks is 8 to 20 percent. However, the incidence among

women who have previously had a child is much lower (5 percent) (Wang et al., 2003). The overall risk of spontaneous abortion after 15 weeks is low (about 0.6 percent) for chromosomally and structurally normal fetuses, but varies according to maternal age and ethnicity (Wyatt et al., 2005). Several studies have concluded that women aged ≥35 years have a higher frequency of various adverse reproductive events: infertility, spontaneous abortion, pregnancy complications (such as Caesarean section, pre-eclampsia), congenital abnormalities, maternal mortality and perinatal mortality, than do younger women (Andersen et al., 2000). One of the most frequent adverse reproductive events is spontaneous abortion, with up to 10% of recognized conceptions lost during the pregnancy (Garcıa-Enguıdanos et al., 2002a). Most studies concerning the risk factors for spontaneous abortion have concluded that the predominant negative effects are those of advanced maternal age (with a clear increase in risk after 35 years) and previous spontaneous abortion (Osborn et al., 2000). Most studies report that around one in five clinical pregnancies will end in miscarriage (fetal death before 24 weeks) (Garcıa-Enguıdanos et al., 2002b). One of the most frequent adverse reproductive events is spontaneous abortion, with up to 10% of recognized conceptions lost during the pregnancy. Most studies concerning the risk factors for spontaneous abortion have concluded that the predominant negative effects are those of advanced maternal age (with a clear increase in risk after 35 years) and previous spontaneous abortion (Wier et al., 2002). Well-established risk factors for miscarriage include increased maternal age (Zinaman et al., 1996) history of miscarriage and infertility (Axmon and Hagmar, 2005) although the interaction between age, parity, infertility and previous pregnancy loss is complex and still not entirely understood. Several behavioural and social risk factors have been reported as increasing the risk of miscarriage, but most remain controversial or unconfirmed. Alcohol consumption, smoking and caffeine intake are the main examples, and controversy remains because few studies have examined these associations in the context of nausea, known to reduce the risk of miscarriage (Wisborg et al., 2003). There are also increasing interest in the role that stress and emotional wellbeing play in pregnancy. Recent emotional trauma and major life events during pregnancy, as well as stressful employment, have been linked to increased risk of miscarriage, but these findings require confirmation, particularly with respect to potential confounding. Evidence to link the classic occupational exposures of lifting, standing, noise and cold to miscarriage is not strong (Arck, 2001). Cigarette smoking has been considered a risk factor for spontaneous abortion (Dempsey and Benowitz, 2001). Studies are required that use data on smoking habits collected before knowledge about outcome of pregnancy, in which early and late abortions are differentiated, and in which adjustment is made for alcohol intake and other lifestyle and socioeconomic factors that might influence the resul (Kesmodel et al., 2002). Diagnosis of a miscarriage may involve checking to see if the cervix is open or closed, testing blood levels of hCG and an ultrasound (Hurt et al., 2012).

Results

A total of 54 patients were examined in the study. Total number of patients was 54. Among them, the minimum age was 16 and the maximum age was 40. The mean of the age came out to be ±27.03 and standard deviation 5.50116. In table 1, Out of 54 patients, 38 patients had vaginal bleeding and 16 patients came out without vaginal bleeding. In table 2, sonographic findings of the patients are illustrated. A detail description is given below.

Table 1: Graphical presentation of vaginal bleeding

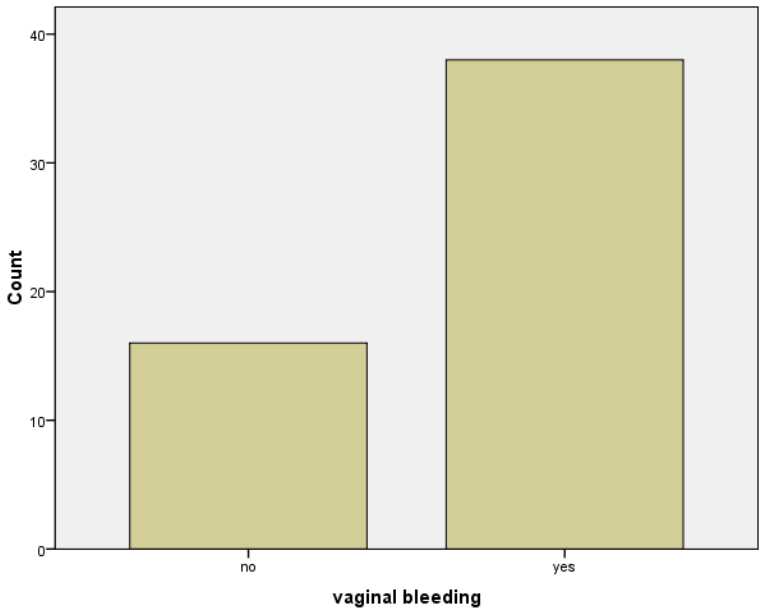

Table 2: Sonographic findings in patients

Sonographic findings	Frequency	Percent
Blighted ovum	11	20.4
CRL with negative FCA	1	1.9
Haematoma	5	9.3
Hydrops fetal	3	5.6
Irregular low lying placenta	1	1.9
Missed abortion	19	35.2
Open internal os	6	11.1
Previa type 3	1	1.9
Previa type I	1	1.9
Recurrent abortion	2	3.7
Scalping of bones	1	1.9
Scanty liquor	3	5.6
Total	54	100

Discussion

In this study, 54 patients were observed and their data was recoded according to data collection process. The objective of this study was to determine various risk factors of spontaneous abortion. A total of 54 patients were examined in the study. According to the table 1, total number of patients was 54. Among them, the minimum age was 16 and the maximum age was 40. The mean of the age came out to be 27.03. According to table 2, Out of 54 patients, 38 patients had vaginal bleeding and 16 patients came out without vaginal bleeding. In table 3, sonographic findings of the patients were illustrated. As the data was collected of 54 patients, among these, 11 patients (20.4%) had blighted ovum, 1 patient (1.9%) had CRL with negative FCA, 5 patients (9.3%) had haematoma, 3 patients (5.6) had fetal hydrops, 1 patient (1.9) had irregular low lying placenta, 19 patients (35.2%) had missed abortion. 6 patients (11.1%) had open internal os, 1 patient (1.9%) had previa type 3, 1 (1.9%) had previa type 1. 2 patients (3.7%) had recurrent abortion. 1 patient (1.9%) had scalping of bones and 3(5.6%) had scanty liquor. According to the table 4, 9(16.7%) patients had 1 gravida, 9(16.7%) had 2 gravida, 22(40.7%) patients had 3 gravida, 4(7.4%) patients had 4 gravida, 9(16.7%) patients had 5 gravida, 1(1.9%) patients had 6 gravida. According to table 5, 14(25.9%) patients had no abortion. 29(53.7%) patients had 1 abortion. 8(14.8%) patients had 2 abortions, 3(5.6%) had 3 abortions. According to table 6, In 54 patients, minimum gestational age was 14 and maximum gestational age in the patients was 168. According to table 7, In 54 patients the minimum pregnancy loss was 21 and the maximum pregnancy loss was 168.

As comparing to a study done in 2017, 30%–50% of conceptions end in spontaneous abortion. Most losses occur at the time of implantation. 15%–20% of clinical pregnancies end in spontaneous abortions. Recurrent pregnancy loss is a frustrating clinical problem both for clinicians and patients. Recurrent pregnancy loss affects 0.5%–3% of women in the reproductive age group, and between 50%–60% of recurrent pregnancy losses are idiopathic. Oxidative stress-induced damage has been hypothesized to play a role in spontaneous abortion, idiopathic recurrent pregnancy loss, hydatidiform mole, defective embryogenesis, and drug-induced teratogenicity. Some studies implicate systemic and placental oxidative stress in the pathophysiology of abortion and recurrent pregnancy loss (Gupta et al., 2007). A preliminary case-control study was conducted on Saudi women to detect possible risk factors for spontaneous abortion (SA). Two hundred and twenty six consecutive women hospitalised for SA and 226 women admitted for normal delivery and used as controls, were studied. Women with SA were significantly older at menarche (Relative Risk (RR) = 3.2), more frequently married to blood-related husbands (RR = 2.1) and husbands older than 50 years (RR = 2.4). Number of previous abortions related linearly to the risk of aborting spontaneously in the next pregnancy. Compared to primigravidas, the RR was 3.2 if the outcome of the most recent pregnancy was SA, and 0.8 if it was a livebirth. A family history of SA was more common among cases (RR = 4.6) (Al-Ansary and Babay, 1994). In another study conducted in 2017 14,595 females were included in the study. The prevalence of uterine fibroids was 15.1% among all participants. Higher number of induced abortions was associated with an increased risk of uterine fibroids (1 induced abortion: odds ratios [ORs] = 1.32, 95% confidence interval [CI] 1.18–1.48; 2 induced abortions: OR = 1.45, 95% CI 1.28–1.64; and ≥3 induced abortions: OR = 1.62, 95% CI 1.39–1.90). Compared with women without induced abortion, ORs for women with 1, 2, and ≥3 were 1.17 (95% CI 1.03–1.32), 1.21 (95% CI 1.06–1.39), and 1.36 (95% CI 1.15–1.61), respectively, after adjustment for potential confounders. No association was observed between the number of spontaneous abortions and the risk of uterine fibroids (Song et al., 2017).

Conclusion

There are multiple sonographic concerning signs but missed abortion and blighted ovum were the most common amongst them.

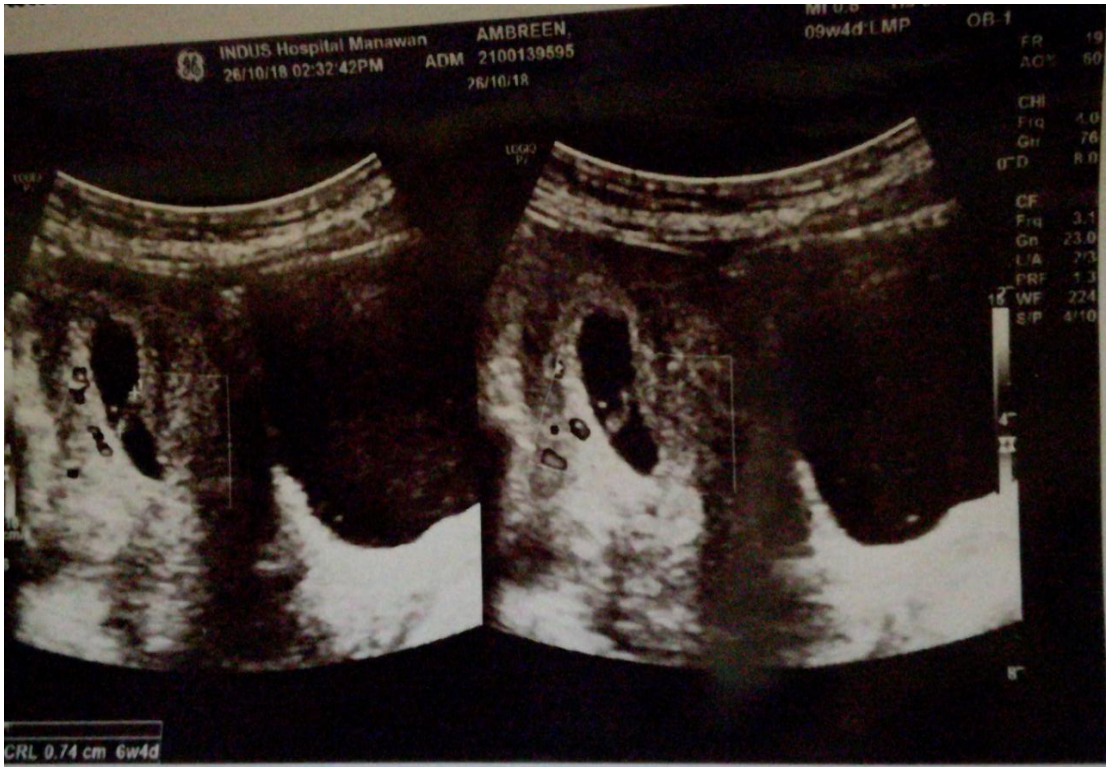

Figure 1: Patient with missed abortion at 6 weeks and 5 days

Figure 2: Scalping bones of fetus and absent cardiac activity

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