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ORIGINAL ARTICLE

OUTCOME OF TWIN PREGNANCIES IN FEDERAL MEDICAL CENTRE AZARE, NIGERIA

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ABSTRACT

Background: The incidence of twin gestation has increased over the past years. Maternal morbidity and mortality are much higher and perinatal mortality rate is 3-4 times higher than in singleton pregnancies. **Objective:** To determine the incidence of twin births and to review the factors associated with maternal and perinatal morbidity and mortality in Federal Medical Centre (FMC), Azare North-Eastern Nigeria. **Methods:** All the twin deliveries from January 2010 to December 2012 were retrospectively reviewed. Data obtained included maternal demographic characteristics, mode of delivery, maternal and fetal outcome. Associations were compared using $\chi 2$ and Fisher's exact test where applicable. P value <0.05 was considered significant. **Results:** There were 12,068 deliveries out of which 180 were twin deliveries giving an incidence of twin delivery of 14.9 per 1000 births. The twinning rate increased from 36 (20.8%) at age 20-24 years to 46 (26.5%) at age 30-34 years, and from 18 (10.4%) at para 0 to 24 (13.9%) at para 4. Most of the patients were unbooked 118 (68.2%) and the mean gestational age at delivery was 36.03$\pm$ 2.42 weeks. The risk of perinatal deaths was significantly higher with assisted vaginal delivery19 (52.8%) compared to spontaneous vaginal delivery. And emergency caesarean section 5 (100%) compared to Elective caesarean section 0 (0.0%) ($p<0.001$). Unbooked status was significantly associated with increased perinatal morbidity and mortality ($p<0.001$). Male-male sex was the commonest combination (38.2%). The commonest form of presentation at delivery was cephalic-cephalic (49.7%) while 62.4 % of the neonates were of low birth weight. Premature babies 24 (58.5%) were more likely to die when compared with non premature babies 17 (41.5%) ($\chi 2 = 44.534$; $p<0.001$). The commonest indication for caesarean section was cephalopelvic disproportion which was seen in 10 (31.3%) of those who had caesarean section. Maternal morbidity rate was 56.6%. The commonest morbidity was preterm labour occurring in 68 (69.4%) of the 98 patients who suffered complications. There was no maternal mortality. **Conclusion:** Unbooked status and adverse perinatal outcome were major findings in this study. Antenatal diagnosis of twin gestation through early booking will enable risk assessment and institution of preventive measures to ensure good outcome.

KEYWORDS: *Perinatal death, morbidity, twins, delivery*

INTRODUCTION

The incidence of twin gestation has increased significantly over the past 15 years primarily because of the availability and increased use of ovulation-inducing drugs and assisted reproductive technology (ART).[1] Significant maternal and neonatal effects result from this increase in multiple births. The financial costs are staggering.[1] Maternal morbidity and mortality rates are much higher in twin than in singleton pregnancy because of preterm labour, haemorrhage, and pregnancy-induced hypertension. Moreover, the perinatal mortality rate of twins is 3–4 times higher than in singleton pregnancies as a result of chromosomal abnormalities, prematurity, anomalies, hypoxia, and trauma.[1-3]

With twins, all possible combinations of fetal positions may be encountered. The most common presentation at admission for delivery is cephalic-cephalic and occurs in up to 42%.[4]

Correct decision on mode of delivery is important considering the increased perinatal morbidity and mortality associated with

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inappropriate selection. Caesarean section has been advised where the first twin is breech, based on extrapolation from the term breech trial, and the desire to avoid the rare interlocking with head entrapment of a presenting breech above a second cephalic twin. The presentation of the second twin is of little relevance until after the birth of the first.[5,6] Historical series suggested that the risk to the second twin increased the greater the delay until its delivery. Where there is abnormal lie of the second twin, external cephalic version or internal podalic version and breech extraction may be used to manipulate the fetus. However, internal podalic version and breech extraction are preferred as the primary procedure as it is associated with a higher chance of success and lower rate of fetal distress.[6]

This study was aimed at determining the incidence of twin births and to review the perinatal mortality associated with fetal complications and different modes of delivery in Federal Medical Centre (FMC), Azare North-Eastern Nigeria

MATERIALS AND METHODS

After obtaining ethical approval from the research and ethic committee, the theatre and labour ward delivery registers of the FMC Azare were retrospectively reviewed for twin deliveries from January 2010 to December 2012. Out of 180 cases managed during the period, only 173 case files were retrieved from the record department and suitable for analysis, giving a retrieval rate of 96.1%. Data obtained and analysed using SPSS 14 software (SPSS, Chicago Ill., USA) included maternal demographic characteristics, mode of delivery, fetal characteristics and maternal and fetal outcome. Associations were compared using χ^2 and Fisher's exact test where applicable and p-value <0.05 was considered significant.

RESULTS

During the 3 year period under review, there were 12,068 deliveries out of which 180 were twin deliveries giving a twin birth incidence of 14.9 per 1000 births. The annual prevalences were 8.0/1000 births in 2010, 21.1/1000 births in 2011 and 23.7/1000 births in year 2012.

The maternal age ranged from 15 to 50 years with mean age of 28.1 ± 6.4 years. The frequency of twinning increases with maternal age from ages 20 years to 34 years, with the highest frequency of 46 (26.5 %) occurring among those aged 30-34 years. There was a decreasing frequency of twinning from age 35 years. One hundred and eighteen (68.2%) of the patients were unbooked while 55 (31.8%) were booked. Seventy two (61%) of the unbooked patients were referred from private and primary health care centres. There was increasing rate of twinning with increasing parity, with frequencies of 18 (10.4%), 21 (12.1%), 24 (13.9%) and 66 (38.2%) among para 0, para 1, para 4 and para 5 or more respectively. The mean gestational age at delivery was 36.03 $\pm$ 2.42 weeks with 105 (60.7%) delivering at 37-40 weeks as shown in table I.

One hundred and forty one (81.5%) of the patients had vaginal delivery and 32 (18.5%) had caesarean section. Among those who had vaginal delivery, seventy two (51.1%) had spontaneous vaginal delivery (SVD) and 69 (48.9%) had assisted vaginal delivery (AVD). Presentation in those that had AVD was non-vertex. Among those who had caesarean section, 29(90.6%) had emergency caesarean section and 3(9.4%) had elective caesarean section.

Table 2 compares the perinatal mortality between different modes of delivery. Overall, 346 babies were delivered- 305 (88.2%) live and 41 (11.8%) dead. There were 246 (80.7%) live babies and 36 (87.8%) perinatal deaths among those who had vaginal delivery compared to 59 (19.3%) live babies and 5 (12.2%) perinatal deaths among those that had Caesarean section with Perinatal Mortality Rates (PNMR) of 127.7/1000 births and 78.1/1000 births respectively. The risk of having live or dead babies in the two groups was not significant (χ^2= 1.225; p=0.268). However, the risk of having perinatal deaths

19 (52%) in those that had assisted vaginal delivery (AVD) was significantly more when compared with perinatal death of 17 (47.2%) among those who had spontaneous vaginal delivery (SVD), with PNMR of 137.7/1000 births and 118.1/1000 births respectively (χ^2=3.463; p=0.001). Similarly, the risk of perinatal death was significantly higher among those delivered via emergency caesarean section (100%) when compared to 0 (0.0%) perinatal death among those delivered via elective caesarean section with PNMR of 86.2/1000 births and 0.0/1000 births respectively (χ^2=3.490; p=0.001).

The risk of the second twin dying 35 (85.4%) was significant when compared to 6 (14.6%) in the first twin with PNMR of 202.3/1000 births and 34.7/1000 births respectively (χ^2=23.270; p=0.001).

Male-male sex was the commonest combination accounting for 66 (38.2%) followed by male-female 62 (35.8%). Female-female combination accounted for 45 (26.0%) of the cases. Cephalic-cephalic presentation was seen in 86 (49.7%) of cases, cephalic-breech in 39 (22.5%), breech-cephalic in 25 (14.5%), breech-breech in 20(11.6%) and cephalic-transverse in 3(1.7%) of cases. Thirty six (10.4%) of the babies weighed less than 1500g, 180(52%) weighed 1500-2499g and 130(37.6%) weighed 2500-3600g. No baby weighed greater than 3600g.

Table 3 shows the various causes of perinatal mortality. There were 41 perinatal deaths giving an overall perinatal mortality rate of 118.5 per 1000 births. Premature babies 24 (58.5) were significantly more likely to die compared to their non-premature counterparts 17 (41.5%) with PNMR of 176.5/1000 births and 81.0/1000 births respectively (χ^2=44.534; p=0.001). The PNMR among those with perinatal asphyxia (325/1000) and congenital anomaly (666.7/1000) were the highest. There was 1 (2.4%) perinatal death among those who had antepartum haemorrhage compared to 40 (97.6%) deaths among those who had no antepartum haemorrhage. The difference was not statistically significant (χ^2=0.609; p=0.705).

The commonest indication for caesarean section was Cephalopelvic disproportion which was seen in 10 (31.3%) of those who had the procedure. Other indications as shown in table 4 included malpresentation in 9 (28.1%) and preeclampsia in 5 (15.6%).

There was no maternal mortality from twin delivery recorded during the study period. Maternal complications are depicted in table 5. Maternal morbidity rate was 56.6%. The commonest morbidity was preterm labour occurring in 68 (69.4%) followed by anaemia in 17 (17.3%) then pregnancy induced hypertension in 9 (9.2%) of the 98 patients who suffered complications.

The risk of preterm babies, low birth weight, retained second twin and perinatal death was significantly higher in unbooked than in booked patients, as shown in table 6

Table 1: Demographic Characteristics of Patients with Twin Pregnancy

Characteristics	Frequency (N=173)	Percentage
Age (Years)		
<20	11	6.4
20-24	36	20.8
25-29	45	26.0
30-34	46	26.5
≥35	35	20.3
Parity		
0	18	10.4
1	21	12.1
2	22	12.7
3	22	12.7
4	24	13.9
≥5	66	38.2
Booking Status		
Booked	55	31.8
Unbooked	118	68.2
Gestational Age at Delivery		
28-33	21	12.1
34-36	47	27.2
37-40	105	60.7

Table 2: Perinatal Mortality versus Modes of delivery

Variable	Perinatal Outcome		Total	PNMR
	Live N(%)	Dead N(%)		(Per 1000 births)
Vaginal Delivery	246 (80.7)	36 (87.8)	282	127.7
Caesarean Section	59 (19.3)	5 (12.2)	64	78.1
Total	**305 (100)**	**41 (100)**	**346**	
	χ^2= 1.225; p= 0.268			
SVD	127 (51.6)	17 (47.2)	144	118.1
AVD	119 (48.4)	19 (52.8)	138	137.7
Total	**246 (100)**	**36 (100)**	**282**	
	χ^2= 3.463; p=0.001			
El. Caesarean Section	6 (10.2)	0 (0)	6	0.0
Em. Caesarean Section	53 (89.8)	5 (100)	58	86.2
Total	**59 (100)**	**5 (100)**	**64**	
	χ^2= 3.490; p=0.001			

PNMR: Perinatal mortality rate; SVD: Spontaneous Vaginal Delivery
AVD: Assisted Vaginal Delivery; El.: Elective; Em.: Emergency

Table 3: Causes of Perinatal Deaths

Causes	Outcome		Total	PNMR (Per 1000 births)
	Live N (%)	Dead N (%)		
Prematurity				
Yes	112 (36.7)	24 (58.5)	136	176.5
No	193 (63.3)	17 (41.5)	210	81.0
Total	**305 (100)**	**41 (100)**	**346**	
	χ^2= 44.534; p=0.001			
Antepartum Haemorrhage				
Yes	16 (5.2)	1 (2.4)	17	58.8
No	289 (94.8)	40 (97.6)	329	121.6
Total	**305**	**41**	**346**	
	χ^2= 0.609; p=0.705			
Perinatal Asphyxia				
Yes	27 (8.9)	13 (31.7)	40	325
No	278 (91.1)	28 (68.3)	306	91.5
Total	**305 (100)**	**41 (100)**	**346**	
	χ^2= 18.464; p=0.001			
Congenital Anomaly				
Yes	1 (0.3)	2 (4.9)	3	666.7
No	304 (99.7)	39 (95.1)	343	113.7
Total	**305 (100)**	**41 (100)**	**346**	
	χ^2= 8.706; p=0.038			

Table 4: Indications for Caesarean section

Indication	Frequency (N=32)	Percentage
Cephalopelvic Disproportion	10	31.3
Malpresentation	9	28.1
Pre-eclampsia	5	15.6
Retained 2nd twin	3	9.4
Prematurity	2	6.3
Retroviral Infection	1	3.1
Previous Caesarean Section	1	3.1
Cord Prolapse	1	3.1

Some patients had more than one indication for caesarean section

Table 5: Maternal Complications

Complication	Frequency (N=98)	Percentage
Preterm labour	68	69.4
Anaemia	17	17.3
Pregnancy Induced Hypertension	9	9.2
Postpartum Haemorrhage	6	6.1
Antepartum haemorrhage	5	5.1

Some patients had more than one complications

Table 6: Comparison of perinatal outcome between booked and unbooked patients

Outcome	Booking Status		Total
	Booked N (%)	Unbooked N (%)	
Maturity			
Preterm	38 (27.9)	98 (72.1)	136
Term	72 (34.3)	138 (65.7)	210
Total	**110**	**236**	**346**
	χ^2= 3.475; p=0.001		
Birth weight			
Low birth weight	69 (31.9)	147 (68.1)	216
Normal birth weight	41 (31.5)	89 (68.5)	130
Total	**110**	**236**	**346**
	χ^2= 3.456; p=0.001		
Second Twin			
Retained	1 (4.5)	21 (95.5)	22
Not retained	54 (35.8)	97 (64.2)	151
Total	**55**	**118**	**173**
	χ^2= 3.633; p=0.001		
Perinatal Mortality			
Dead	8 (19.5)	33 (80.5)	41
Alive	102 (33.4)	203 (66.6)	305
Total	**110**	**236**	**346**
	χ^2= 3.489; p=0.001		

DISCUSSION

The twining rate of 14.9 per 1000 births recorded in this study is lower than the 53 per 1000 deliveries[7-9] reported among the Yorubas in South-West Nigeria and 25.3-27.6 per 1000 births[10-12] reported from South-Eastern part of Nigeria but higher than 12.1 per 1000 deliveries[13] and 7.1 per 1000 deliveries[4] reported in United Kingdom and USA respectively. Though higher, it however supports the incidence of 14.4 per 1000 deliveries[14] reported from Maiduguri, a city located in the same North-East region with the study centre, where low incidence of twinning[15] has been reported. Unlike in the study area, the species of yam (Dioscorea rotundata) found in the Yoruba land contain an ovulation induction agent and this may explain the high incidence of twinning among the Yorubas in Nigeria.[16] Twinning is also influenced by race, being more common among the blacks than the Caucasians. This probably explains the low incidence in the UK and USA compared to our environment.

Increase maternal age up to 35 years and high parity are independent risk factors for twinning.[7] The increase incidence with age is due to rising follicle stimulating hormone levels.[7] This was collaborated in our study and is in agreement with 52.5 % increase from age 20 to 34 years and 51.4% increase from para 0 to 4 reported in previous studies.[17,18]

Almost half of the 81.5% of the patients who had vaginal delivery were assisted in the form of assisted breech delivery, internal podalic version and breech extraction mostly for the second twin. Although it is associated with significant higher perinatal mortality rate compared to spontaneous vertex delivery, the proportions of live births are comparable. The comparable live births might be due to the fact that most of the twins were presenting cephalic and therefore did not required assistance. The high mortality rate was probably due to perinatal asphyxia as most of these patients were self referral from home or referred from clinics where attempts at delivering had failed. However, experienced obstetricians are required to carefully select cases for assisted vaginal delivery and successfully carry out the procedure in order to reduce the morbidity and mortality associated with it. The caesarean section rate of 18.5% from this study is much lower than the rates obtained in many other studies.[11,17-19] The low rate in our study could be due to the fact that twins were undiagnosed until at presentation in advanced labour leaving little or no time to prepare for caesarean section, and the general aversion to this route of delivery by women in developing countries.

The sex ratio among twins in our study was 1.28 males to 1.0 female which agrees with finding from a similar study in Jos, Nigeria.[18] It is however lower than the global primary sex ratio of 1.06 boys to 1.0 girls.[20] Hormones may be responsible for the higher proportion of the male infants in this study because twin pregnancies are often associated with raised levels of gonadotrophins which are associated with a decrease in the sex ratio.[20] First twin was cephalic in 72.3% of cases. This compares favourably with the general rate[6] of 70% and 69.3% reported from Jos[18] but lower than 88.2% from Maiduguri.[17] Maternal complications such as preterm labour, pregnancy induced hypertension, maternal anaemia, and antepartum haemorrhage as found in this study are common with twin pregnancy and support findings from similar studies.[11,17] The mean gestational age in twins is 37.4weeks compared to 39.7weeks in singleton and the incidence of preterm labour[7] is about 40-60 %, which is lower than 69.4% obtained from our study. A substantial proportion (39.3%) of patients had preterm delivery which is the most important contributor to high perinatal mortality in twin pregnancies.[21] Several studies have reported similar finding.[11,17-19] This high incidence of preterm labour together with anaemia may be due to the fact that the pregnancies were not supervised in most of the patients. In addition, women in developing countries usually start pregnancy with iron deficiency because of poor nutrition, malaria and worm infestations, and

the increased demand of these micronutrients by the growing foetuses worsens the already existing anaemia.[7]

Perinatal mortality rate was 118.5 per 1000 births which though lower than the reported rates of 158.5/1000 in South-south Nigeria[19] and 142.6 per 1000 in Lagos,[7] is higher than 107/1000 in Maiduguri[17] and 91/1000 in Jos.[18] The difference in rates could be due to difference in study design and availability of effective and efficient special care baby unit. Prematurity and perinatal asphyxia were the leading causes of perinatal deaths in our study. Prematurity is associated with an increased risk of respiratory distress syndrome, intracranial haemorrhage, low birth weight and neonatal morbidity and mortality.[22]

CONCLUSION

Preterm labour, anaemia and pregnancy induced hypertension were major maternal complications in this study. Assisted vaginal delivery and prematurity were major contributors to perinatal morbidity and mortality especially of the second twin. Efforts must be geared toward educating women and their families on the need for antenatal care, and prevention of premature births. Improving the neonatal services will reduce the morbidity and mortality associated with prematurity. Drills on assisted vaginal deliveries and planned elective caesarean section in indicated cases will reduce hazards associated with assisted vaginal deliveries, especially in the delivery of the second twin.

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ORIGINAL ARTICLE

BREAST CANCER AWARENESS AND SCREENING PRACTICES AMONG FEMALE HEALTH WORKERS OF UNIVERSITY OF MAIDUGURI TEACHING HOSPITAL

GALI BM

ABSTRACT

Background: Breast cancer is the most commonly diagnosed cancer among women globally including Nigeria. It is of global concern and of important public health interest as it is one of the leading causes of morbidity and mortality. But it is not on the priority list for policy makers, donor agencies and health professionals in Nigeria. Late presentation of patients with advance disease is the hallmark of breast cancer in Nigerian women and this is directly related to poor awareness of the disease and lack of screening. **Objectives:** To document screening practices among female healthcare workers in University of Maiduguri Teaching Hospital. **Methods:** A descriptive cross-sectional survey among female health workers was designed to examine breast cancer knowledge, attitude and screening practices. **Results:** A total of 203 out of 250 eligible female health workers participated in the study giving 81.2% response rate; 89.3% knew breast cancer as the commonest cancer among women and 95.0% knew at least one form of breast cancer screening method or the other. Seventy-five and half percent were aware of breast self examination, 51.0% of clinical breast examination and 87.1% mammography as screening methods. The attitude and practice of any of the screening methods were however poor among all the categories of female health workers. Lack of awareness of potential benefits and misconception constituted the major hindrance to poor mammography screening rate. **Conclusion:** Female health workers at the UMTH are "breast cancer aware" and have satisfactory knowledge of screening methods but poor attitude and practice to breast cancer screening. There is need for training and retraining of female health workers as regard the importance of breast cancer screening and government backed policy on breast cancer screening to reverse this ugly trend.

KEY WORDS: *breast cancer awareness, attitude, screening practices, female health workers.*

INTRODUCTION

Globally, breast cancer is the most commonly diagnosed cancer among women and is now the most common cancer in Nigeria having overtaken carcinoma of the cervix.[1] Breast cancer has become a source of global concern as the second leading cause of cancer death in women behind lung cancer in America and other industrialized nations.[2] It has been reported that each year over 1.5 million women worldwide are diagnosed with breast cancer and more than half die from the disease.[2] There is increasing incidence of breast cancer especially in developing countries like Nigeria. The increase in incidence has been ascribed to an increasing wave of westernization, changes in demographic, socioeconomic and epidemiologic risk factors and better reporting of the disease.[1] There seems to be an increase in general awareness of breast cancer in recent times due to increased advocacies by Nigerian Cancer Society (NCS), Non-Governmental Organizations (NGO), and Federal Ministries of Health (FMOH).[3] According to Adebamawo,[1] and Okobia,[4] despite increased advocacy and turnout of patients that seek medical care; late presentation with advance breast cancer is still the rule rather than the exception.[1,4] Screening for early detection coupled with appropriate treatment has remarkably improved the survival of breast cancer patients. Cancer screening tests play an important role in reducing breast cancer morbidity and mortality. Screening is related to perceptions of risk, benefits and barriers through reasoning process that includes personal and social influence and attitudes. In Nigeria, there is yet no government backed national breast cancer screening policy because

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it is not on the top priority list of policy makers and even health professionals, despite recent global cancer statistics that showed rising incidence rate.

Breast self-examination (BSE), clinical breast examination (CBE) and mammography are recognized screening methods that enhance early diagnosis of breast cancer and provide the patients with added opportunity of breast conserving operation with improved prognosis. American cancer society has recommended that breast cancer screening includes monthly BSE, annual CBE for women aged equal to or greater than 40 years, annual mammography for women aged greater than 50 years and mammography every two years for women between the ages 40-49 years .[5] However, the practice of any of these methods is dependent on the awareness about breast cancer. If this knowledge is poor among those who should teach others, there will be difficulty promoting this life saving methods. The awareness and knowledge about breast cancer vary among different communities and population groups worldwide.

It is a well-known fact that, for health workers to be effective as educators they must possess the appropriate knowledge, attitude and beliefs concerning the health behavior being promoted .[6] There are many studies that examined the roles of female health workers such as physicians, Nurses , and other female health workers in promoting breast cancer screening as reported by some authors.[7-12] Mammographic screening procedure was introduced in 2007 at the University of Maiduguri Teaching Hospital (UMTH) with about five (5) free screening conducted so far. Hence, this study aimed to evaluate knowledge, attitude and practice of breast cancer and its screening practices among various female health workers of UMTH.

MATERIALS AND METHODS

The study was conducted among female health workers of UMTH that had clinical training and employed as clinical staff to render diagnostic, therapeutic or preventive services to patient especially cancer related: A total of 400 female health workers made up the study population with 300 Nurses and 100 other health workers; doctors, pharmacists, physiotherapist, radiographers, medical Lab. scientist, medical and health Information system. Excluded are female health workers who had no clinical training and employed in the administration, finance and all other non clinical areas. Because of the larger number of female Nurses compared to the rest, only half were selected randomly, while the rest of the female health workers; doctors, pharmacist, physiotherapist, medical laboratory scientist, and radiographers were all included. Only 122 out of 150 eligible nurses and 83 of the 100 other health workers completed and returned the questionnaire that were appropriately filled giving a response rate of 81% and 83% respectively. Data was collected by a self administered questionnaire after considering all possible variables according to information, developed on the basis of relevant literature. The questionnaire was pre-tested among 10 female health workers who were not included in the study. Informed consent was obtained from all participants having gotten ethical clearance from the research and ethics committee of the University of Maiduguri Teaching Hospital. Data was collected on socio-demographic characteristics, knowledge of breast cancer, risk factors, screening methods as well as practice of breast self-examination (BSE), clinical breast examination (CBE) and mammography. Each professional group was scored based on the number of correct answers. Percentage score or mean score for each participant or different professional group was calculated and compared using one-way ANOVA. The practice of BSE was considered for each professional group of workers and compared with some selected demographic variables. Data analysis was done using SPSS Version 18.0 statistical package and difference was considered statistical significant at $p < 0.05$

RESULTS

A total of 250 questionnaires were administered, 203 were filled appropriately by the female health workers that were analyzable giving 81.2% response rate. Of the 203 female health workers that participated in this study; the nurses constituted more than half 122(60.1%), followed by doctors 34(16.7%), while the rest constitute 47(23.2%) as shown in figure 1. The respondent's ages ranged between 20 and 61 years with a mean age of 36.3 $\pm$ 7.7. Majority of the respondents 92(45.3%) and 57(28.1%) were in the 30-39 and 40-49 age group with only one above 60 years, as shown Figure 2. Majority of the female health workers were married 160 (78.8%), followed by 37(18.2%) singles, while 2 (1.0%) and 4(2.0%) were divorced and widowed respectively table 1. Table 2 depicts the knowledge score of the various categories of health workers. A total of 13 questions were asked and each correct (yes) score is one while incorrect (no or I don't know) score is 0. Those who scored 10-13 are graded as having excellent knowledge, those with 6-9 as good knowledge while those with 5 or less are considered to have poor knowledge. Based on this, doctors have equal number of respondents with excellent 17(50.0%) and good 17(50.0%) knowledge, nurses had only 4 (3.3%) with excellent knowledge, majority of them 94(77.0%) had good knowledge while 24(19.7%) of them had poor knowledge, for the other category of health workers 4 (8.5%) had excellent knowledge, 24 (51.1%) and 19(40.4%) had good and poor knowledge respectively. The difference was statistically significant. As regards the awareness of breast cancer screening methods; 95% of the health workers were aware of screening methods with only 3.0%, 5.0% and 6.4% not aware of any screening methods among the Doctors, Nurses and Other Health Workers respectively. The difference was not statistical significant. $p<0.795$ as shown in Table 3.

For the knowledge of breast self examination; 75% of the female health workers were aware of BSE as a screening method, but the level of awareness varies with the doctors 31(91.2%) being aware as against Nurses 93(76.2%) and other health workers 28(60.9%) respectively. The differences were statistically significant. (Table 4a.) For the practice of breast self examination; there is an overall 82(40.4%) with excellent, 104(51.2%) good and 17(8.4%) with poor level of BSE practice. But the level of practice was significantly different among the various health workers with 12(35.3%) doctors, 57(46.7%) nurses and 13(27.7%) other health workers having excellent result. The screening mammography knowledge was scored out of 4; those who got all 4 correct as excellent, 2-3 as good and those with 1 or 0 as poor. There were no category of female health worker with excellent score, 31(91.2%) of doctors had good knowledge as compared to Nurses with 76(62.3%) and 32(68.1%) other Health workers with good knowledge respectively. The difference was statistically significant, (table 6). The screening mammography rate by age grouping revealed poor uptake of mammography as only 22(38.6%) of those within the ages 40-49 and 3(27.3%) of those within the ages 50-59 had a screening mammography. The only one person above 60 year has had screening mammography. Table 7 depicts the potential barriers to screening mammography with lack of awareness followed by fear of results having the highest frequencies.

Table 1: Marital status of the respondents

Marital status	Frequency N(%)
Married	160(78.8)
Single	37(18.2)
Divorcee	2(1.0)
Widowed	4(2.0)
TOTAL	203(100.0)

Table 2: Knowledge of Breast Cancer and risk factors

Category of H/W	Excellent score N(%)	Good Score N(%)	Poor Score N(%)	Total N(%)
Doctors	17(50.0)	17(50.0)	0(0)	34(100.0)
Nurses	4(3.3)	94(77.0)	24(19.7)	122(100.0)
Other H/W	4(8.5)	24(51.1)	19(40.4)	47(100.0)
Total	**25(12.3)**	**135(66.5)**	**43(21.2)**	**203(100.0)**

Table 3: Awareness of Breast Cancer Screening Methods

Category of H/W	Yes Awareness N(%)	No Awareness N(%)	Total N(%)
Doctors	32(94.1.0)	2(5.9.0)	34(100.0)
Nurses	114 (93.4.0)	8(6.6.0)	122(100.0)
Other H/W	44(93.6)	3(6.4)	47(100.0)
Total	190(93.6.0)	13(6.4)	203(100.0)

$X2 = 0.459$, $df=2$, $p<0.795$

Table 4a: Knowledge of Breast Self Examination

Category of H/W	Yes aware N(%)	Not aware N(%)	Total n(%)
Doctors	31(91.2)	3(8.8)	34(100.0)
Nurses	93(76.2)	29(23.8)	122(100.0)
Other H/W	28(59.6)	19(40.4)	47(100.0)
Total	152(74.9)	51(25.1)	203(100.0)

X2 =9.800, df=2, p<0.007

Table 4b: Breast Self Examination Practice

Category of H/W	Excellent N(%)	Good N(%)	Poor N(%)	Total N(%)
Doctors	12(35.3)	19(55.9)	3(8.8)	34(100.0)
Nurses	57(46.7)	61(50.1)	4(3.3)	122(100.0)
Other H/W	13(27.7)	24(51.1)	10(21.3)	47(100.0)
Total	82(40.4)	104(51.2)	17(8.4)	203(100.0)

X2 = 16.629, df=4, p=<0.002

Table 5: Knowledge of mammography as a screening method for Breast Cancer.

Category Of H/W	Excellent N(%)	Good N(%)	Poor N(%)	Total N(%)
Doctors	0	31(91.2)	3(8.8)	34(100.0)
Nurses	0	76(62.3)	46(37.7)	122(100.0)
Other H/W	0	32(68.1)	15(31.9)	47(100.0)
Total	0	139(68.5)	64(31.5)	203(100.0)

X2=10.278, DF=2, P=0.006

Table 6: Screening Mammography rate by age groupings

Age Grouping(Yrs)	Yes N(%)	No N(%)	Total N(%)
<30	7(16.7)	35(83.3)	42(100.0)
30-39	15(16.5)	76(83.5)	91(100.0)
40-49	22(38.6)	35(61.1)	57(100.0)
50-59	3(27.3)	8(72.7)	11(100.0)
> 60	1(100.0)	0(0.0)	1(100.0)
Total	28(23.8)	154(76.2)	202(100)

X2=14.036, df=4, p < 0.007 significant

Table 7: Barriers to screening mammography

Reasons	Frequencies (%)
Lack of awareness	131(64.5)
Fear of results	70(34.5)
Cost/Lack of Money	44(21.7)
Lack of Permission	21(10.4)
Embarrassing	19(9.4)

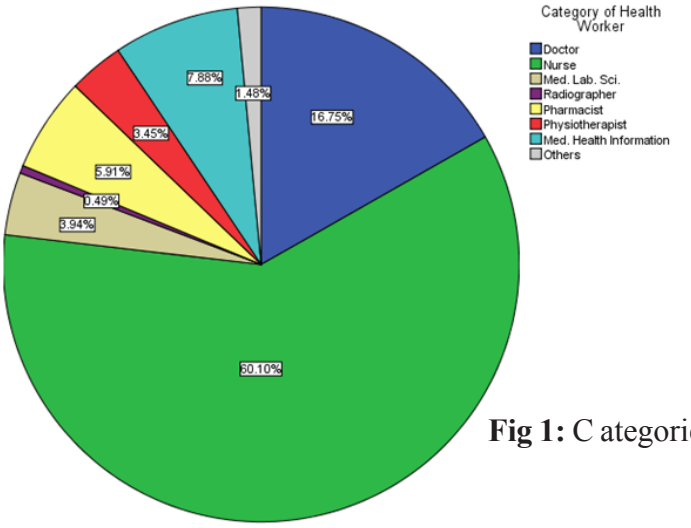

Fig 1: C ategories of female health workers**,** UMTH

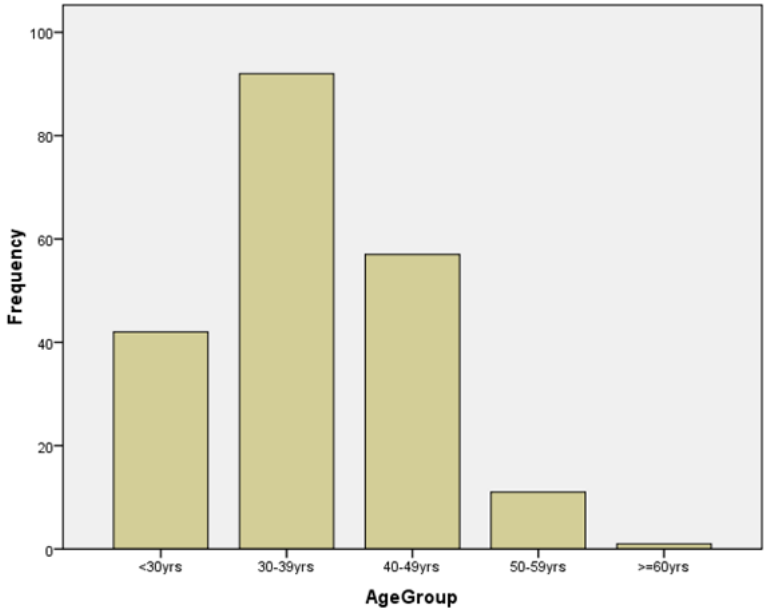

Fig 2: Age distribution of female health workers, UMTH

DISCUSSION

Late presentation of breast cancer at advance stages is directly related with the level of awareness about breast cancer, the risk factors and practice of the screening methods as reported by some authors.[1,3,4] In this study, although 89.25% of all the health workers were aware that breast cancer was the commonest cancer in women, when their knowledge level was tested out of 9 questions; half of the doctors (50%) had excellent knowledge score, only 3.3% of the nurses and other 8.5% of the other health workers respectively had excellent knowledge about breast cancer. The remaining half of the Doctors, 77.0% of the nurses and 51.1% of the other Health workers had good knowledge. None of the doctors had deficient or poor knowledge, but 19.7% of the nurses and 40.4% of the other health workers are still deficient or had poor knowledge regarding breast cancer. This differences which was statistically significant may be explained by the fact that apart from the doctors and nurses, the other health workers may not have adequate knowledge about the pathology of breast cancer as the doctors in their academic curricular or had close contacts with breast cancer patients like the nurses as part of routine health care delivery. Excluding doctors with no poor knowledge of breast cancer and the risk factors, other female health workers including the nurses had substantial number with poor knowledge. This is in keeping with other studies in Benin and Lagos among nurses and female health workers where unsatisfactory level of knowledge about breast cancer was found.[6, 9, 10,] Similarly, lower level of knowledge was found among community dwelling women in Benin,[4] and among rural women in North-eastern Nigeria,[13] but higher among Qatari women who demonstrated adequate knowledge about breast cancer particularly the educated elite.[14] Studies among female health care professionals in Turkey and Tehran revealed adequate knowledge as they were well aware of the risk factors, sign and screening modalities but the use of BSE and mammography was found to be lower than expected considering the fact that they were health care professionals.[16,17] Education and awareness alone may contribute in a favourable shift in the stage of breast cancer at presentation. Education can be achieved with very low costs using simple and popular means; such as radio and television advertisement and programs. Education need to be culturally appropriate

and targeted toward the individual population so that highest benefit can be gained. It is also important to educate men as well as women because men can facilitate early detection in their partner and help to reduce the barrier to seek care.[15] The important aspect of awareness is the dissemination of the knowledge that breast cancer is curable and if diagnosed early survival rate is good. It is also important to educate health care providers, especially those who come in regular contact with women. These providers may be physicians, nurses and midwives. Evidence suggest, for example that nurses can play an important role providing the information regarding breast cancer in countries with limited resources.[9] This role has been expanded in some advanced countries with the evolution of Specialist breast-care nurses; these nurses are involved in public advocacy, care giving, support and research.[18]

As regards awareness of breast cancer screening methods; 75% of the health workers were aware of BSE as a screening method, but the level of awareness varies with 91.2% of the doctors being more aware as against 76.2% of the Nurses and 60.9% of the other H/W respectively. Although majority knew about BSE, this was not evident from their attitude as overall, only 40.4% showed excellent, 51.2% good and 8.4% poor level of BSE practice respectively. The level of practice was significantly different among the various health workers with 35.3% Doctors, 46.7% nurses and 27.7% other health workers having excellent result.

Breast self examination (BSE) makes women more "breast aware", which in turn may lead to earlier diagnosis of breast cancer.[6] The rationale behind extending BSE practice as a screening test is the fact that breast cancer is frequently detected by women themselves without any other symptoms. Thus, regular practice will increase the probability of detecting breast cancer at an early stage. According to stepwise approach of Global Summit Panel 2002, [19] breast self examination would be the approach for early detection in limited resources countries where mammography may not readily be available. Knowledge and beliefs about breast cancer and its management are important determinants of women's health seeking behavior. The theoretical framework for the study was based on health belief model (HBM) adopted from Glanz.[20] The model views health behavior as influenced by personal beliefs or perception about a disease and the strategies available to decrease its occurrence. The following four perceptions serve as the main constructs of the model; perceived seriousness, perceived susceptibility, perceived benefits, and perceived barriers. Each of these perceptions, individually or in combination can be used to explain health behavior. More recently; other constructs have been added to the HBM; thus the model has been expanded to include cues of action, motivating factors, and self-efficacy. Most early breast cancers are self-discovered and the majority of the self discovered cancers are by breast self examination, even more importantly teaching the procedure raises awareness about breast cancer.

The knowledge of CBE as a screening method is reassuring as 51.0% of the respondents agree to have their breast examined by doctors when they find any abnormalities with their breast but majority of the nurses and other health workers did not agree to routine CBE thus the practice of CBE by study participant is rather poor. Only 31.5% ever had CBE. Perceived barriers to regular performance of CBE by women include feeling of discomfort and embarrassment.

Majority of the female health workers that participated in the study were aware of mammography as a screening method for early breast cancer. The doctors were more knowledgeable with 97.1% aware as against the nurses with 82.6%; the other health workers were also knowledgeable 91.5%, and the differences were not statistically significant. Their level of awareness were tested out of 4: if mammography can detect breast lump before a doctor can feel it on examination, at

what age is mammography more beneficial, is mammography a painful procedure and whether mammography is a safe procedure. None of the health worker have excellent score as none got all the 4 correctly, but the doctors had more good knowledge score than the nurses and other health workers as 91.2% of the doctors had good score and 8.8% poor, while the nurses had 62.3% good and 37.7% poor score, the other health workers had 68.1% good and 31.9% poor level of awareness. The difference was statistically significant. Only 23.6% ever had screening mammography out of 203 respondents despite the availability of the service at UMTH since 2007. Cost may not be the limiting factor because at least free screening was conducted 5 times and there were periods dedicated to only staff of the hospital to access. Reports from many developing nations often indicate lower rates of mammography screening practice particularly among community dwelling women, as reported by Okobia in his study.[4] In contrast, significantly higher rate of mammography screening is often reported among women in advanced countries. Of particular note is age group from 5th, 6th and 7th decade of life that showed increasing rate with 100% in 7th decade in which mammography is more beneficial. The fact that the facility is not readily available or accessible could be the reason for non-use. Even when it is available, the presumed high cost of the procedure may be a barrier particularly for women in resource poor setting like Nigeria. But most importantly in this study lack of awareness and fear of the results were the main barriers, because the cost has been subsidized. There were so many misconceptions that bothered so much on fear of the results, the cost and some were not even sure of the potential benefits. This is rather worrisome particularly among female health workers who were expected to embrace the concept and serve as advocates for other community–dwelling women. The study identified lack of awareness in 64.5%, the fear of the results in 34.5%, the high cost/ lack of money in 21.7%, lack of permission from their husbands in 10.3% and that the procedure can be embarrassing in 9.4%, as some of the factors militating against access to screening methods. However, misconceptions such as screening mammography increases the risk of breast cancer and that breast feeding was a risk factor as reported by some authors[13, 21] were not observed in this study. In Nigeria, previous studies on breast cancer knowledge showed low level of awareness of breast cancer and practice of screening methods among female health workers. In order to function as effective promoter of breast cancer control through early detection, health workers must possess the relevant knowledge as well as appropriate attitude and belief concerning the disease and its early detection. The present level of knowledge and particularly poor practice needs to be improved beyond the present level.

Although, the finding in this study showed majority had adequate knowledge about breast cancer and the screening methods, this was not evident from their attitudes as the practice of screening methods among all the female health workers were still low with serious policy implications.

There is an urgent need for educating all the female health workers on the need to avail themselves for breast cancer screening as regard the importance of Breast Cancer Screening

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ORIGINAL ARTICLE

ELECTIVE HYSTERECTOMY AT USMANU DANFODIYO UNIVERSITY TEACHING HOSPITAL SOKOTO NORTH WESTERN NIGERIA

BURODO AT, PANTI AA, SHEHU CE, UKWU AE

ABSTRACT

Background: Hysterectomy is one of the commonest major gynaecological operations performed all over the world. This study is the first audit of hysterectomies at Usmanu Danfodiyo University Teaching Hospital (UDUTH) Sokoto, north western Nigeria. **Objectives:** To determine the indications and outcome of elective hysterectomies at UDUTH Sokoto. **Methods:** This was a retrospective study of all the cases of elective hysterectomies performed over a five year period (January 2008 – December 2012) at UDUTH Sokoto. Information on demographic characteristics, indication for surgery, type of hysterectomy, histopathological findings and post-operative complications were reviewed and analyzed. **Results:** The incidence of elective hysterectomies was 9.80% of all gynaecological operations and 26.50% of all major gynaecological operations. Out of this, 78.91% was abdominal hysterectomy while vaginal hysterectomy accounted for 21.05%. The main indication was uterine fibroid (53.94%), which was also the commonest histological finding (38.15%). Febrile morbidity (10.53%) was the commonest post-operative complication. There was no mortality recorded. **Conclusion:** Hysterectomy is relatively safe in our centre and is one of the commonest gynaecological operations.

KEY WORDS: *Elective hysterectomy, audit, indications.*

INTRODUCTION

Hysterectomy is a major gynaecological operation often performed in gynaecological practice for benign and malignant conditions[1,2].

In the developed countries where women cherish their liberty, hysterectomy is mainly performed for menstrual problems[2]. There is a rising incidence of hysterectomy in the developed countries [3,4,5,6]. However, studies have shown that developing countries record a low incidence[3,4,5]. In Nigeria, it constitutes about 28% of all major gynaecological operations at the University College Hospital Ibadan[7] and 40% in Obafemi Awolowo University Teaching Hospital Ile-Ife[8]. Various reasons have been advanced for the low incidence of hysterectomy in developing countries. Most women will reject hysterectomy for fear of surgery, loss of feminity and sexual rejection by their spouses while others see menstruation as a means by which the body rids itself of "bad blood". Therefore, hysterectomy is reluctantly accepted only when there is an obvious life threatening pathology in the uterus or the adnexae[5,7]. In spite of this, hysterectomy is still a relatively common gynaecological procedure in Nigeria[1,2,3,5]. The morbidity and mortality associated with hysterectomy have been reduced due to improvement in anaesthesia, surgical techniques, blood transfusion services and the use of potent antibiotics[5,7,8]. There are various indications for hysterectomy. The commonest ones are uterine fibroids, utero-vaginal prolapse and menstrual disorders[7,8,9]. This is the case in both developed and developing countries.

Traditionally, hysterectomy is performed through laparotomy but of recent, laparoscopic assisted vaginal hysterectomy and other minimally invasive procedures are gaining ground in the developed countries[10,11]. This option however, will be useful only when women present early with small uterine fibroid.

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This study seeks to determine the indications and outcome of elective hysterectomy at Usmanu Danfodiyo University Teaching Hospital, Sokoto.

MATERIALS AND METHODS

A list of patients who had elective gynaecological hysterectomy from 1st January 2008 to 31st December 2012 was compiled from the operation register of the main theatre of the Usmanu Danfodiyo University Teaching Hospital, Sokoto. The case notes were retrieved from the medical records department. Data relating to age, parity, indications and post-operative complications for hysterectomy were reviewed. One hundred and six (106) hysterectomies were performed during the study period. However, only 76 case notes were retrieved which gives a retrieval rate of 71.7%. The information obtained were coded and fed into the computer for analysis using the Epi-Info Statistical package version 3.5.1.

RESULTS

There were 1,084 gynaecological operations during the period under review. Out of which 404 were major while 680 were minor operations. One hundred and six (106) hysterectomies were performed during the study period given an incidence of 9.8% of all gynaecological operations and 26.5% of all major gynaecological operations. Sixty patients (78.95%) had abdominal hysterectomy while 16 (21.05%) had vaginal hysterectomy. The age range was 21-60 years with peak age range of 31-40 (43.4%). This is depicted in table 1 below.

Fourteen patients (18%) were nulliparous while 9 (12) were para 1-2,

13 (17.0%) were para 3-4 and 40 (53%) were para 5. This can be seen in table 2 .

The commonest indication as shown in table 3 below was uterine fibroid (53.94%), followed by utero-vaginal prolapse (21.05%), carcinoma insitu of the cervix (10.52%), ovarian tumour (6.57%) and dysfunctional uterine bleeding (5.26%). All the abdominal hysterectomies were total abdominal hysterectomies.

The histological findings included uterine fibroid (38%), carcinoma in situ of the cervix (11%), and mature cystic teratoma (3%). Endometrial carcinoma, squamous cell carcinoma of the cervix, serous cystadenocarcinoma of the ovary and mucinous cyst adenocarcinoma of the ovary were seen in a patient each. There was no histological abnormality in 8.0 % of cases while results were not available in 27 (36 %) of cases as shown in table 4.

Morbidity was recorded in 14 (18.42%) cases as shown in table 5. Out of these morbidities, 10 were recorded in total abdominal hysterectomies while 4 in vaginal hysterectomies. The complications included febrile morbidity in 8 patients (10.53%), wound infection in 2 patients (2.63%), urinary tract infection in 3 patients (3.94%) and ureteric injury in 1 patient (1.31%). There was no mortality recorded.

TABLE 1: Age Distribution

Age	No	%
21-30	7	9.2
31-40	33	43.4
41-50	24	31.6
51-60	12	15.8
Total	**76**	**100%**

TABLE 2: Parity Distribution

Parity	No	%
0	14	18
1-2	9	12
3-4	13	17
≥5	40	53
Total	**76**	**100%**

TABLE 3: Indications and types of Hysterectomy

Indications	Abdominal		Vaginal		Total	
	No	(%)	No	(%)	No	(%)
Uterine fibroid	41	53.94	_	_	41	53.94
Utero-vaginal prolapse	_	_	16	21.05	16	21.05
Ovarian tumours	5	6.57	_	_	5	6.57
Dysfunctional uterine bleeding	4	5.26	_	_	4	5.26
Carcinoma in situ of the cervix	8	10.52	_	_	8	10.52
Endometrial carcinoma	1	1.31	_	_	1	1.31
Invasive carcinoma of the cervix	1	1.31	_	_	1	1.31

TABLE 4: Histological findings on hysterectomy specimens

Histological findings	Number	Percentage
Uterine fibroid	29	38
Carcinoma of the cervix	8	11
Endometrial carcinoma	1	1
Squamous cell carcinoma of the cervix	1	1
Serous cystadeno carcinoma of the ovary	1	1
Mature cystic teratoma	2	3
Mucinous cystadeno carcinoma of the ovary	1	1
No abnormality	6	8
Result not available	27	36

TABLE 5: Recorded Morbidity

Complications	Abdominal		Vaginal	
	No	(%)	No	(%)
Febrile morbidity	6	7.9	2	2.63
Urinary tract infection	1	1.31	2	2.63
Ureteric injury	1	1.31	_	_
Wound infection	2	2.63	_	_
	_	_		

DISCUSSION

The incidence of 9.8% of all gynaecological operations and 26.5% of all major gynaecological operations observed for elective gynaecological hysterectomy in this study is low when compared with 14.3% to 22.7% in some developed countries[1,2,6] and 28% in other studies in Nigeria[5,7]. This is probably due to the importance attached to child bearing in this environment[2,3,11]. The commonest indication for hysterectomy as found in this review was uterine fibroid (53.94%) followed by utero-vaginal prolapse (21.05%). This is consistent with reports from other studies[3,4,5,7,11]. This stresses the fact that uterine fibroids are the commonest female genital tract tumours. Utero-vaginal prolapse is the second indication for hysterectomies and the commonest indication for vaginal hysterectomy. These may be due to advanced age, multiparity and unsupervised home birth.

The peak age incidence of 31-40 years found in this study represented the commonest age range for uterine fibroid which is the most common indication for hysterectomy in this and other studies[3,4,5,7,11] . Majority of the patients (52.63%) were para 5 and above. This is similar to the report from other institutions[3,4,5,7,11]. These groups of patients are likely to consent to hysterectomy because of their high parity. The vaginal hysterectomy of 21.05% recorded in this study is less than the 36.7% recorded in another study[5]. It is also less than 40-45% quoted in the developed contries[7,9] . This may be related to the low incidence of pelvic adhesions and smaller size of fibroids that makes vaginal hysterectomy easy in developed countries[12] and also due to the fact that most patient who might have utero-vaginal prolapse in our environment tend to consider it as a normal ageing process and may not present for treatment except with complications[12].

There was no single case of subtotal hysterectomy in this study perhaps because the surgeons were not confronted with severe adhesions or were verse in the procedure and also hesitant of leaving the cervical stump behind due to the risk of subsequent development of carcinoma of the cervical stump which is lethal and difficult to treat [7,13].

The commonest morbidity was fever (10.53%) which is lower than what was recorded in another study[5]. The febrile morbidity was responsive to antipyretics. Wound infections recorded could have been due to the poor nutritional state of some patients which may have played a role in this infection. There was no mortality recorded. These may be due to the improvement in anaesthesia, surgical techniques, blood transfusion services and the use of antibiotics[14].

In conclusion, hysterectomy remains one of the commonest gynaecological operations in our center. The incidence is lower than that found in other institutions. Hysterectomy is relatively safe in our environment as observed by low morbidity and zero mortality in this series.

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ORIGINAL ARTICLE

IMPACTED URETHRAL STONE AS SEEN IN UNIVERSITY OF MAIDUGURI TEACHING HOSPITAL, NORTH EASTERN NIGERIA

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ABSTRACT

Background: Urolithiasis is common in arid and semi arid zones of the tropics where Maiduguri is geographically located. Impacted urethral stones are not common globally however in this geographical location impacted urethral stones are not uncommon, affecting all age groups though predominantly a disease of the male. Common lower urinary tract anomalies associated with urethral stone impaction ranged from BPH, stricture, diverticulae, phimosis, paraphimosis etc. Prompt evaluation, diagnosis and adequate treatment of the underlying anomalies as well as removal of the stone offers the best outcome. **Objectives:** To determine the clinical presentation and outcome of patients with impacted urethral stone. **Methods:** We retrospectively studied all patients that were managed in University of Maiduguri Teaching Hospital (UMTH) and environs on account of impacted urethral stones between January 2001 to December 2010. Records were obtained from operation registers, wards and medical record department. Data was computed and analysed using EPI info 2004 version. **Results:** A total of 32 patients were seen, all patients were males, age range was 2 to 68 years. Acute urinary retention, dribbling and pain were the predominant symptoms. The commonest site of impaction was the anterior urethra. Fourteen had 2% Xylocaine lubrication with spontaneous expulsion in 5, and forceps extraction in 9. The study found anatomical anomaly/ pathology comprising of meatal stenosis, stricture, benign prostatic hyperplasia and phimosis. **Conclusion:** In early impaction simple measures like 2% xylocaine lubrication followed by spontaneous expulsion or forceps extraction in uncomplicated cases often suffice.

KEYWORDS: *Impacted, Urethral Stone, 2% Xylocaine, Spontaneous, Extraction.*

INTRODUCTION

Male urethral stone is a rare clinical entity in western part of the world but continues to be common in developing world.[1] Arid and semi arid zones of the tropics are known to have high incidence of urolithiasis due to attendant higher ambient temperature and state of relative dehydration[2].

Different endoscopic and operative techniques have been used in the treatment of impacted urethral calculi. Holmium laser lithotripsy can also be used transurethrally as in out-patient procedure to treat impacted urethral stones especially when they cannot be retrogradely manipulated into the bladder. In our environment external urethrolithotomy, retrograde manipulation into the bladder and cystilithitomy are the methods commonly used for the removal of impacted urethral calculi.[3] Newly proposed method of instillation of 2% Xylocaine jelly followed by spontaneous expulsion was also reported[4]. However due to technical challenges various techniques can be used in combination[5]. In this study we report our experience with impacted urethral stone management.

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MATERIALS AND METHODS

This was a retrospective study of patients that were managed in University of Maiduguri Teaching Hospital (UMTH) and environs on account of impacted urethral stones between January 2001 to December 2010. Written permission from the hospital Research and Ethical Committee was obtained for the study. Records were obtained from operation registers, wards and medical records department. Five patients were excluded due

to incomplete records. Data was computed and analysed using EPI info 2004 version. All patients gave informed written consent for the respective procedures performed. Basic investigations included packed cell volume, urinalysis, urine microscopy, culture and sensitivity, random blood sugar, plain X-ray and abdomino-pelvic ultrasound scan, and in children haemoglobin genotype. All patients received parenteral antibiotics(ceftria zone,gentamicin) and analgesics(pentazocine diclofenac). Procedures were done under anaesthesia, 2%xylocaine lubrication, spinal, and general.

RESULTS

A total of 32 patients were seen, all patients were males, age range was 2 to 80 years, with a mean of 19.7 ± 23.1 (Table 1). Acute urinary retention, dribbling and pain were the predominant symptoms in 29 (89.5%), 27 (84.2%), and 29 (89.5%) patients respectively(Table 2). The commonest site of impaction was the anterior urethra 23(71.9%) while posterior urethra accounted for 9(28.1%) (Table 3). Ten (31.3%) had associated bladder stone. Urine culture was done in 28 patients(87.5%) yielding coliform in 21(75%) with E.coli predominating 11(52.4%). Nine (28.1%) patients had retrograde manipulation into the bladder and cystolithotomy, another 9(28.1%) had external urethrolithotomy. Fourteen (43.8%) had 2% Xylocaine lubrication with spontaneous expulsion in 5(15.6%), and forceps extraction in 9(28.1%). (Table 4) The study found anatomical anomaly/pathology in 9(28.1%) comprising of 4(12.5%) meatal stenosis, stricture and benign prostatic hyperplasia 2(6.3%) each while 1(3.1%) had phimosis. Incidentally the study found rectal prolapsed and inguino-scrota hernia in 1(3.1%) each, and hydrocele in 2(6.3%). The associated anomalies/ pathologies were also treated. Three of the 4 patients with meatal stenosis had meatotomy while the fourth had meatoplasty. The 2 patients with stricture had urethroplasty-one penile skin flap augumentation urethroplasty,and the other resection and end to end anastomosis. The 2 BPH patients had transvesical prostatectomy. The patients with phimosis, and hernia had circumcision and herniotomy respectively. There was no mortality. Morbidities were limited to post operative wound infections in 4 patients, one patient each with vesicocutaneous fistula, urethrocutaneous fistula, orchitis, and urethral stricture(which was treated by dilatation). All the patients treated with 2%xylocaine lubrication followed by spontaneous expulsion or forceps extraction were discharged home as day case. The remaining patients (18), had a hospital stay ranging from 5-21days; with mean hospital stay of 1weeek.

Table 1 Age distribution (years)

Range	Frequency(%)
<10	12(38 %)
10-19	5(16 %)
20-29	5(16 %)
30-39	3(9 %)
40-49	2(6 %)
50-59	2(6 %)
>60	3(9 %)
Total	**32(100 %)**

Table 2 Symptoms and signs

Acute retention	29(90.6%)
Pain	27(84.4%)
Dribbling	22(68.8%)
Palpable stone/induration	22(68.8%)
Full bladder	22(68.8%)

Table 3 Site of impaction

Anterior urethra:	
Meatus	2(6.3%)
Fossa navicularis	4(12.6%)
Penile	12(37.5%)
Bulbar	5(15.6%)
Posterior urethra	9(28.0%)

Table 4 Treatment methods

2%xylocaine+spontaneous expulsion	5(16%)
2%xylocaine+forceps extraction	9(28%)
External urethrotomy	9(28%)
Manipulation cystolithotomy	9(28%)
Total	**32(100%)**

DISCUSSION

Lower urinary tract stone is common in the developing world where poverty, ignorance and diseases prevail as opposed to upper tract stones that are commonly seen in affluent societies[6]. Urethral stones are rarely primary, they usually gravitate from upper tract and bladder except those that occur secondary to pathology in the urethra such as diverticulae, stricture etc[7]. This study found impacted urethral stone occurring in all ages but commoner in children as reported earlier[8]. Predorminant features found in our study where acute urinary retention, pain and dribbling of urine. Similar findings were reported by Bedii Salman[8]. However, our findings is at variance with a study by Akhtar et al[9] that found a palpable stone in the urethra as the predominant feature. Impaction in the anterior urethra accounted for over 70% with posterior urethra accounting for less than 30%, as opposed to findings by Kamal et al[10] that found predominantly posterior impaction.

Retrograde manipulation and cystolithotomy and external urethrotomy have been the traditional methods of managing impacted urethral stones. However, new treatment modalities are widely used in developed societies, like the use of Holmium laser lithotripsy, ultrasound fragmentation , use of retrograde manipulation and extracorporeal shockwave lithotripsy[11-13] These facilities are not readily available in developing countries. Retrograde manipulation and cystolithotomy, and external urethrotomy are the main stay in the treatment of impacted urethral stones in the west African subregion due to lack of modern facilities. We observed that simple measures like lubrication with 2% Xylocaine jelly followed by extraction or spontaneous expulsion are effective in most cases of early impaction, a technique advocated by el- sheriff et al[5]. The 2% Xylocaine is a local anaesthetic as well as lubricant so making it very effective in alleviating pain and spasm. This is most effective in early impaction within 72hrs. This modality is safe with no mortality and acceptably minimum morbidity comparable to the modern techniques, especially in the developing world where mordern facilities are not available.

CONCLUTION

The study found 2% xylocaine lubrication in the treatment of early impacted urethral stone very effective. The traditional ways of manipulating urethral stones into bladder followed by cystolithotomy, and external urethrolithotomy are still useful in the developing economy where high tech facilities are unavailable.

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ORIGINAL ARTICLE

EXPERIENCE WITH MANUAL VACUUM ASPIRATION AT UNIVERSITY OF MAIDUGURI TEACHING HOSPITAL

ISA B, MAIRIGA AG, IBRAHIM SM, BAKO BG, USMAN HA

ABSTRACT

Background: Each year, nearly 67,000 women die from unsafe abortion and about 5 million more are injured These could be prevented if clinicians were trained and equipped to use a simple, inexpensive medical devise – the manual vacuum aspiration (MVA) instrument.**Objective:** To document the indication for use of MVA in women with first trimester miscarriage in UMTH. **Method:** A retrospective review of MVA record book of patients who underwent MVA was carried out in the department of Obstetrics and Gynaecology UMTH from June 2007 to July 2012.Data were collected and analyzed for age, marital status, gestational age, presenting complaint, analgesic methods used, indications and post abortion contraception. **Results:** During the study period, 672 patients underwent surgical management for early pregnancy loss using MVA. Most of the patients 507(75.4%) are between 20 to 34 years age with a mean of 27 ±4 years. Most of the procedures 593(88 %) were carried out in patients whose miscarriages occurred between 7-12 weeks of gestation. Married women accounted for the highest number of cases 646(96,1%). Intramuscular Penthazocine was the method of pain control in most cases 648(96.4%). Incomplete abortion 592(88.1%) was the commonest indication for use of MVA, while per vaginal bleeding 636(94,6%) was the commonest presentation. Majority of the patients 512(76.1%) were not counseled for post abortion contraception. There was no recorded immediate complication following the procedure. **Conclusion:** MVA procedure is a safe technique in the management of incomplete abortion in our center. Most of the patients who had the procedure in our center were not counseled for post abortion contraception which is an integral part of post abortion care.

KEYWORDS: *Manual vacuum aspiration, Miscarriage, Experience, indication, post abortion contraception*

INTRODUCTION

Abortion is one of the major causes of maternal morbidity and mortality in most part of sub-Saharan Africa [1]. It accounts for about 40% of maternal deaths in some communities in Nigeria [1-2]. There are approximately 20 million cases of abortions every year, and large proportions are induced [2]. Abortion has also been implicated as a cause of secondary infertility, ectopic pregnancy, mid trimester spontaneous abortion and preterm labour[3].

Abortion can be managed surgically by evacuation of the uterus, medically with misoprostol or expectantly by awaiting spontaneous expulsion of the failed pregnancy. Many patients with early pregnancy loss are unwilling to undergo expectant management or misoprostol treatment, and therefore surgical treatment is performed[3]. This can either be performed by dilatation and curettage, with electrical vacuum aspiration (EVA) or manual vacuum aspiration (MVA)[3]

Vacuuming as a means of removing the uterine contents was pioneered in 1958 by Drs Wu Yuantai and Wu Xianzhen in China[4]. The method was pioneered and improved on by Henry Morgentaler in Canada, achieving a complication rate of 0.48% and no death in over 5000 cases[4]. Dorothea Kerslake introduced the method into the United Kingdom in 1967 and published a study in the United States that further spread the technique[5]. The technique was refined in early 1970s by Harvey Karman with the development of the Karman cannula[4,5],

Vacuum aspiration may be used as a method of induced abortion, as a therapeutic procedure after miscarriage, to aid in menstrual regulation and to

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obtain sample for endometrial biopsy. It is also used to terminate molar pregnancy[6].

Manual vacuum aspiration is an out patient procedure that generally involves a clinic visit of several hours. The procedure typically takes less than 15 minutes[7]. It is safe, effective and simple. MVA is safer and less costly than other surgical procedure like D& C[8]. It can be performed out side the operating theater- the treatment room of clinic or emergency unit. MVA does not require electricity and so can be performed in locations that have unreliable electricity services or none at all. It also has the advantage of being quiet without the noise of electrical vacuum aspiration[7]. Most patients remain comfortable during the procedure without much pain. Gentle supportive treatment of the patient and use of analgesic, couple with frequent verbal communication and reassurances are sufficient[8]. So it reduces the hospital cost and saves time for both patients and clinicians. It is a measure which can greatly contribute to the reduction of maternal mortality and morbidity[7,8].

MATERIALS AND METHODS

This retrospective descriptive study was conducted at Obstetrics and Gynecology Department of University of Maiduguri Teaching Hospital from June 2007 to July 2012. Ethical approval was obtained from the ethical committee of the Hospital. All women who underwent MVA due to any reason during the study period were identified from data register of Post abortion care (PAC) room. Data were collected on specially designed profoma and analyzed on SPSS version 15 (SPSS Inc, Chicago, IL) .

The MVA was performed in the procedure room in gynaecological ward or procedure room in gynaecological clinic. Gestational age was calculated from last menstrual period and from Ultrasound Scan (USS). Patient with missed abortion had cervical ripening with 400ug of vaginal Misoprostol. IM Pentazocine (30mg) or IM Paracetamol (100mg) was given for pain control. After the procedure, Ipas easy grip cannulae and MVA plus aspirator were highly disinfected and sterilized with Chlorine as per protocol to avoid transfer of infection. Ipas easy grip cannulae were used and negative pressure were obtained by using a 60mls Ipas MVA plus aspirator by attaching with cannulae. Procedure was ended when signs and symptoms of complete evacuation felt; these include red foam in the cannulae, gritty sensation, uterus contracting around the cannulae and increase uterine cramping felt by the patient. Products of conception were sent for histopathology. Patients were given oral Augmentin 625mg b.d, and Metronidazole 400 mg t.d.s. for one week.

RESULTS

Between June 2007 to July 2012, 672 patients who had MVA were studied. Participant characteristics are shown in Table 1. Age range of the patients was 15 to 45 with most of the patients 507(75.4%) being 20 to 34 years. The mean age was 27 $\pm$4 years. Majority of patients were married 646(96.1%), only 26(3.9%) of them were single.

Most of the patients 593 (88 %) had the procedure at 7-12 weeks of gestation and only 35(5.2%) had it at gestational age of less than 7 weeks

Six hundred and thirty six (94.6%) patients presented with per vaginal bleeding and 3(0.4%) with pain in the lower abdomen. Indication for MVA were incomplete abortion in 592(88.1%), missed abortion in 49(7.3%), retained products of conception after term delivery 4(0.6%), dysfunctional uterine bleeding in 19(2.8%) and molar pregnancy in 8(1.2%) as shown in table 2.

Sedation with intramuscular (IM) Pentazocine was the mode of pain control in most of the cases 648(96.4%), followed by IM Paracetamol in 24 (3.6%).

Majority 512(76.1%) of the patients were not counseled for post abortion contraception, only 160(22.7%) had the counseling. Most of the patients were stable during the procedure and all procedures were carried out by doctors.

Table 1. Age distribution and marital status

Age	No	%
15-19	47	7.0
20-24	125	18.6
25-29	226	33.6
30-34	156	23.2
35-39	85	12.6
40 & above	33	5
Total	**672**	**100.00**
Marital status		
Married	646	96.1
Single	26	3.9
Total	**672**	**100.00**

Table 2. Gestational age, presenting complaints and Indication for MVA

Variables	No	%
Gestational age		
< 7	35	5
7-9	164	24
10-12	429	64
N/S	44	7
Total	**672**	**100.0**
Presenting complaints		
PVB	636	94.6
LAP	3	0.4
N/S	33	5
Total	**672**	**100.0**
Indications		
Incomplete abortion	592	88.1
Missed abortion	49	7.3
DUB	19	2.8
Molar pregnancy	8	1.2
2PPH	4	0.6
Total	**672**	**100.00**

PVB- per vaginal bleeding
LAP- lower abdominal pain
N/S- not stated
DUB- dysfunctional uterine bleeding
2PPH- secondary post partum hemorrhage

DISCUSSION

Early pregnancy loss is a common experience for women; approximately one in four women will experience a miscarriage in her life time [9]. For women under going early pregnancy loss, vacuum aspiration is one treatment option. MVA has been reported to be save and effective for this indication[9,10,11].

From our study, MVA was commonly performed on women aged 20-34 years. This is similar to reports from Nguru and Jos[12,13], where most of the patients were in their active reproductive period.

Most of the procedures in our study were carried out in patients whose miscarriages occurred between 7-12 weeks. This agrees with previous studies [12,14]. MVA with the use of Karma's syringe has been advocated for use for early pregnancy loss less than 12 weeks gestation; use in more than 12weeks gestation has been associated with incomplete evacuation and tendency of uterine perforation by fetal bony parts.

A large proportion of patients who had the procedure where married. This is because many patients who are not married go to private clinics. This is true even in the case of USA where 19% of women of 27-30 years failed to report their abortion[8].

In our study, most of the cases came with per vaginal bleeding and few with lower abdominal pain, these finding are consistent with a previous study[8].

IM Pentazocine was the predominant analgesic use in our study. This is also a common practice for MVA in Nguru and Jos[12, 13].

Studies have shown that the vast majority of MVA procedures are performed for incomplete abortion[12.13.14]. This was also noted in this study as 88.1% of the patients had the procedure on account of incomplete abortion.

The result of this study suggests that 76.1% of the patients were not counseled for post abortion contraception. This is in contrast to previous study in which 72.9% had post abortion contraception and 47.9% had information, education and counseling (IEC) on post abortion care and post abortion family planning[15]. This is an area that needs to be re-emphasized to doctors offering PAC services in UMTH. Women should be counseled about and offered contraception when receiving post abortion care. Contraception acceptance and continuation rate are higher when offered at the site of initial treatment[16]. All women need to know that fertility return just a few weeks after abortion and thus they need to protect themselves from unintended pregnancy.

In conclusion, MVA is a safe and effective technique in the management of abortions. However it has been noted in this study that there is low use of post abortion contraception which is an integral part of post abortion care.

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ORIGINAL ARTICLE

A CLINICAL APPRAISAL OF HOARSENESS IN ADULTS AT UNIVERSITY OF MAIDUGURI TEACHING HOSPITAL

ISA A, SANDABE MB, NGAMDU YB, GARANDAWA HI, KODIYA AM

ABSTRACT

Introduction: Hoarseness is a disorder characterized by altered pitch, quality and loudness leading to impaired vocal communication. Causes in sub-Saharan Africa are varied. **Objective:** this study aims at evaluating the clinical spectrum of the various causes and to highlight the hazards in the delay of health-seeking to other health practitioners in the region. **Methods:** Case records were reviewed, data collected include, duration of hoarseness, head and neck or laryngeal trauma, or laryngeal surgery, smoking, alcohol intake, peptic ulcer disease, or gasro-eosophageal reflux disease.Patients had ear, nose, and throat examination, fibre-optic nasolaryngoscopy and the results recorded. Tissue biopsy was by direct laryngoscopy. Result was analyzed with Statistical package for the social sciences (SPSS) version 16.0 for windows. **Results:** One hundred and seventeen (117) case records were reviewed, males constituted, 85 (72.6%), and females, 32 (27.4%). Majority were aged 27-36yrs, (26; 30.8%). Age range was 18 to 70 years with a mean of 36.5 + 13.7 years. The commonest cause was chronic non-specific laryngitis including vocal cord nodule, 47 (40.2%), duration ranges from 1day to 60 months, with a mean of 11.0 ±13.9 months. **Conclusion:** Causes of hoarseness in adults were varied, and timely hospital presentation remains a challenge to the otolaryngologist. Leading causes were chronic non-specific laryngitis and carcinoma of the larynx. Hoarseness persisting more than two weeks should have otolaryngologist evaluation, and health educators should emphasize on the hazards of delay.

KEY WORDS: *hoarseness, Adult, laryngitis, smoking, tracheostomy*

INTRODUCTION

Voice production is a complex process and it involves sound production and resonation, the quality of sound produced is wholly dependent upon the vibratory characteristics of the laryngeal structures, most importantly the nature of the vocal cords adduction during phonation and the regularity of its vibration[1]. The sound produced is resonated by the rest of the vocal tract to produce a recognizable voice quality.

Hoarseness is defined as a disorder characterized by altered vocal quality, pitch, loudness or vocal efforts that impair communication or reduces voice related quality of life[2]. The disorder reflects structural or functional changes in the vocal cords which may be due to laryngeal tumors, trauma, inflammations, or affectation of vocal cord mobility[1]. The various aethiopathological conditions of hoarseness in sub-Saharan Africa and the possible hazards make an overview a challenge.

This study aims at evaluating the clinical spectrum of the causes of hoarseness in adults and to highlight the hazards in the delay of health-seeking to other health practitioners in the region.

MATERIALS AND METHODS

This is a retrospective review of patients aged 18years and above presenting with hoarseness as the major complaint to the ear, nose and throat clinic of the University of Maiduguri Teaching Hospital from January 1st, 2011 to 31st December 2012.

Case files of the patients were retrieved from the health records department and reviewed. Data extracted includes; patient's bio-data, duration of hoarseness, history of head and neck trauma or surgery, history of peptic

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ulcer disease, non-ulcer dyspepsia or gastro-eosophageal reflux disease. Others included social habit of the patient (smoking and alcohol intake, the quantity and duration). All histological diagnosis made were also reviewed.

All patients had thorough ear, nose and throat evaluation followed by fibre-optic nasolaryngoscopy with, pentax fibre-optic nasopharyngolaryngoscopes, FNL -10RP3 (without instrument channel) and all images were recorded. Tissue biopsy was by direct laryngoscopy under general anaesthesia.

The data obtained was collected and analyzed using the statistical package for the social sciences (SPSS) version 16.0 for windows. Statistical significance was taken as 0.05 at 95% confidence level.

RESULTS

A total of 117 patients who primarily presented with hoarseness within the study period were reviewed. There were 85(72.6%) male and 32(27.4%) females, with the age range of 18years to 70 years and a mean age of 36.5$\pm$ 13.7years. the male to female ratio M:F = 3:1

The age distribution in years were 18-26, 33(28.2%), 27-36, 36(30.8%) 37-46, 16(13.7%), 47-56, 20(17 %), 57-66, 11(9.4%) and 67-76, 1(0.9%).

The most common cause of hoarseness in the study was found to be chronic non-specific laryngitis including vocal cord nodules with 47(40.2%), followed by carcinoma of the larynx with 27(23.1%) and acute laryngitis, 13(11.1%) as detailed in Table 1

The duration of hoarseness before presentation ranges from one day to five years (60 months) with a mean of 11.0$\pm$13.9months Table 2.

Emergency tracheostomy as a result of upper airways obstruction included, laryngeal carcinoma 18 (15.4%), laryngeal trauma, 9 (7.7%) and vocal cord paralysis, 4(3.4%): Table 3

Fig 1 shows the fibre-optic nasolaryngoscopy finding of a vocal cord nodule in a 33 year old male school teacher with hoarseness of three months duration.

Fig 2 Shows the fibre-optic nasolaryngoscopy findings showing bulbous arytenoids and hyperaemic vocal cords in a 25 year old female house wife with chronic non-specific laryngitis.

Thirty- three (28.2%) of the 47 patients with chronic non-specific laryngitis, were found to have smoked a packet of cigarette a day for a minimum of 5yrs, chi-square test was significant: x^2=103, at 1df, p=0.001.

Four (3.4%) of the 47 patients, who were found to occasionally take one or two bottles of alcohol per week: x^2 =0.07, at 1df, p=0.783

Table 1: Distribution of Aetiology by Gender

Diagnosis	Male	Female	Total (%)
* Chronic Non-specific Laryngitis including Vocal cord nodules	32	15	47(40.2)
* Cancer of the larynx	24	3	27 (23.1)
* Acute laryngitis	6	7	13 (11.1)
* Laryngeal trauma	10	2	12(10.3)
* Hypopharyngeal Cancer	5	1	6 (5.1)
* Vocal cord palsy	1	3	4 (3.4)
* Respiratoty papillomatosis	3	1	4 (3.4)
* Laryngococle	2	0	2 1.7)
* Foreign bodies	2	0	2 (1.7)
Total	**85**	**32**	**117(100.0)**

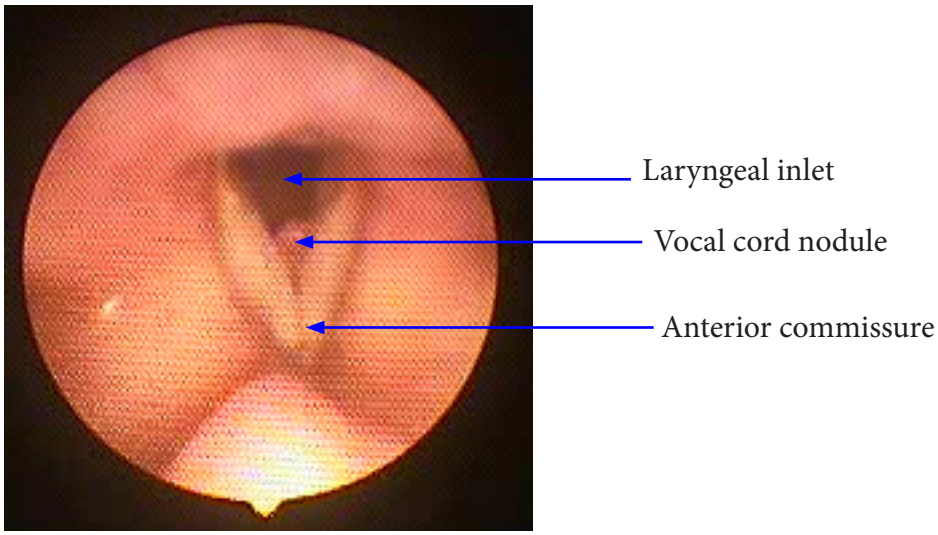
Table 2: Duration of Hoarseness

Duration (Months)	No (%)
<1	15(12.8)
1- 5	39(33.3)
6 - 12	32(27.4)
13-18	9(7.7)
19-24	7(6.0)
25-30	3(2.6)
31-36	5(4.3)
>36	7(6.0)
Total	**117(100.0)**

Table 3: Emergency Tracheostomy at Presentation

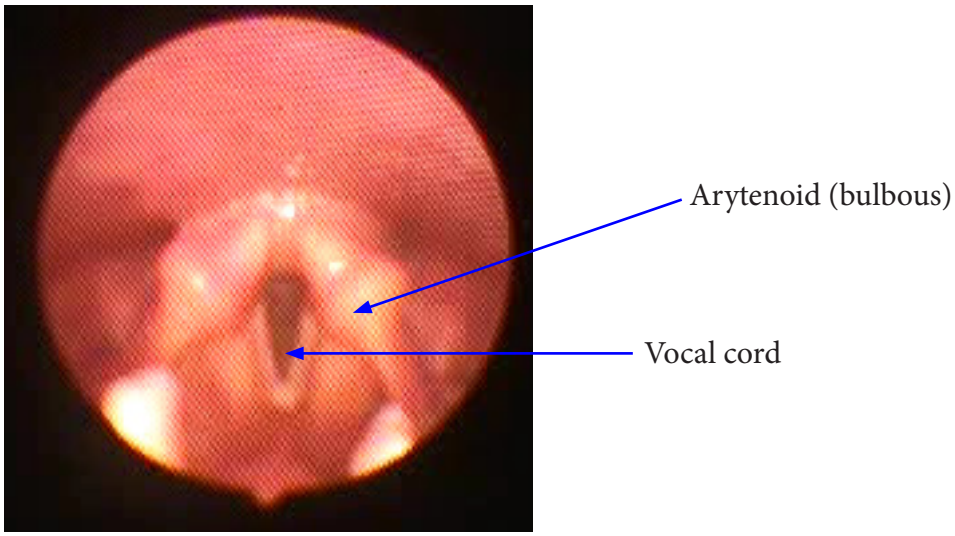
Diagnosis	Tracheostomy Needed		Total
	Yes	No	%
Carcinoma of the larynx	18	9	27(23.1)
Laryngeal trauma	9	3	12(10.1)
Hypo-pharyngeal Carcinoma	3	3	6(5.1)
Respiratory papillomatosis	1	3	4(3.4)
Vocal cord palsy	4	0	4(3.4)
Foreign bodies	2	0	2(1.7)
Others	0	62	62(53.2)
Total	37	80	117(100.0)

Fig 1. Vocal cord Nodule



A 33 year old male school teacher with vocal cord nodule

Fig 2; chronic non-specific laryngitis



A 25 year old female house wife with chronic non-specific laryngitis

DISCUSSION

Hoarseness may be a symptom, a sign of dysfunction of the phonatory apparatus, but not a diagnosis[3]. It reflects changes in the structure or function of the vocal cords which may be due to laryngeal inflammation, trauma, neoplasm, alteration of vocal cord mobility, foreign bodies or an affectation of laryngeal nerves[4].

The commonest cause of hoarseness in this study was chronic non-specific laryngitis including vocal cord nodules, which is in consonance with earlier findings.[5, 6] This could be due to chronic irritation such as cigarette smoking. Some of our patients with chronic non-specific laryngitis were found to have smoked at least 1 packet of cigarette per day for a minimum of five years.

Chronic non-specific laryngitis has been associated with malignant transformation[7]. Hence, early hospital presentation and close follow-up of patients with hoarseness is advised. Opinion vary regarding the duration of hoarseness before visit to the otolaryngologist.

Some studies advocate hospital visit with hoarseness lasting for more than two weeks[5], while others advocate hoarseness lasting greater than twelve weeks or irrespective of duration if a serious underlying cause is suspected with reduction in the voice-related quality of life, [8]

Alcohol intake was found to be low in this study. This is in contrast with an earlier finding[5]. The low alchohol intake in our study is probably attributed to religious belief. There were few patients with acute laryngitis in our study which may be due to delay in presentation, probably as a result of over reliance on over-the-counter drugs.

The common aerodigestive malignancies in this study were carcinoma of the larynx and hypopharynx, and most of the patients had tracheotomy at presentation as a result of upper airways obstruction. This agrees with other studies in sub-Saharan African.[9, 10, 11]

Respiratory papillomatosis was less common in this study, probably because the adult on-set type is less aggressive and uncommon than the juvenile on-set type, as has been found in earlier studies.[12, 13]

Laryngeal trauma in this study was 10.2%, consisting of blunt and penetrating injuries in addition to burns and corrosives. This is in contrast with an earlier study[6], and may be due to the heightened insecurity in the region with more patients seen with gunshot wound to the head and neck.

Uncommon causes of hoarseness in this study, as in a previous study[6] includes vocal cord palsy which were all post-thyroidectomy and laryngocoele. Laryngeal foreign body inhalation was also found to be uncommon in this study, This agrees with an earlier study in the area[14]. and may be due to the less likelihood of adults indulging in the play with objects orally as compared to children.

CONCLUSION

The findings of our study showed that the commonest cause of hoarseness in adults is chronic non-specific laryngitis including vocal cord nodule, and that cigarette smoking plays a major role in the aetiology. Most of the patients with aerodigestive malignancies had emergency tracheostomy at presentation, due to upper air-ways obstruction.

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CASE REPORT

ABSCESS TONSILLECTOMY: A REPORT OF FIVE CASES

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SUMMARY

Peritonsillar abscess (PTA) is one of the common causes of emergency admissions in otolaryngology. Abscess tonsillectomy as a treatment for PTA varies along geographical line; however, it is a simple, effective and safe procedure. We present a case series of 5 patients who had abscess tonsillectomy and followed up for 2 or more years. No septic complication or abscess recollection seen. We recommend abscess tonsillectomy for all PTA in a resource constrained environment.

KEY WORDS: *abscess tonsillectomy, safety, effectiveness, economical*

INTRODUCTION

Peritonsillar abscess (PTA) has been reported to be the most common deep space infection of the head and neck occurring in both children and adults[1]. Abscess tonsillectomy (Immediate tonsillectomy) or incision and drainage (I&D) with or without a follow-up tonsillectomy (interval tonsillectomy) and appropriate/ adequate antibiotics are generally the conventional modalities of care[2]. In majority of cases the infection may be caused by mixed flora of anaerobic and aerobic bacteria[3]. Group 'A' β-haemolytic streptococcus (Streptococcus pyogenes) remain the commonest pathogen increminated[4].

In Nigeria the incidence is not known but is likely to be higher than that of developed economies. This is because of the endemic nature of infections generally and indiscriminate use of antibiotics. In the United States of America, annual incidence has been reported as 30 cases per 100 000 population[5].

Classically unilateral quinsy presents with bulging anterior faucial pillar and the adjacent soft palate and uvula displacement to the contralateral side[6,7]. Other clinical features may include odynophagia, fever, muffled voice, trismus, dysphagia, referred otalgia, pooling and drooling of saliva[8].

Treatment of peritonsillar abscess has been surrounded by controversies as no guidelines exist. However, its management remained principally surgical ranging from needle aspiration or incision and drainage, and tonsillectomy either immediate (abscess tonsillectomy) or delayed (interval tonsillectomy). Despite the demonstrated evidence of benefit of abscess tonsillectomy many otorhinolaryngolists avoid it due to the expected higher rate of complications like infection dissemination and post tonsillectomy haemorrhage[9]. In a study conducted in Nigeria[10], 97% of Otolaryngologist will do interval tonsillectomy only 3% practice abscess tonsillectomy.

In this study we present our experience with five consecutive abscess tonsillectomies done between 1st January, 2010 and 31st December, 2010 at Federal Medical Centre Gusau, Zamfara state, Nigeria. These patients were followed up for two or more completed years (1st January, 2011 to 31st December, 2012). This is aimed at encouraging other otolaryngologist in the tropics (resource constrained and high

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infection rate environment) to copy and reduce cost for these mostly poor patients.

CASE 1

B. U was a 10year old female who presented to emergency paediatric unit with 4/7 history of painful swallowing, fever, trismus and drooling of saliva. History of recurrent tonsillitis could not be ascertained. We were called to see her 6 hours after admission. On examinnation, she was ill looking, febrile, with good hydration status (was on IV fluid at time of review). Throat examination revealed swollen left tonsil involving the adjacent soft palate, and the uvular was pushed to the contralateral side. There were bilateral submandibular lymph node enlargements, tender on the left side and freely mobile. A clinical assessment of left peritonsillar abscess was made. Child could not tolerate diagnostic needle aspiration. Intravenous fluid and antibiotics (amoxicillin-clavulanate) were continued. Minimal investigations were done due to financial constraint (FBC, E/U/C). Abscess tonsillectomy was done 48hours after admission under general anaesthesia via orotracheal intubation. Intraoperative findings confirmed presence of left peritonsillar pus collection. There was apparently more bleeding than what we usually see in non abscess tonsillectomies but there was no indication for transfusion. Post operatively patient maintained progressive clinical improvement and was discharged 5th day after admission (2nd post-operative day). She was seen a week after discharge, then two months followed by 6monthly visits for 2 years. There was no re-accumulation of pus and no throat infection during this period.

CASE 2

Y. T was a 33year old house wife who presented to the emergency department of the hospital with a week history of progressive odynophagia, fever and muffled voice. She has been on self-prescribed antibiotics (?types) since onset with minimal improvement. Fever gets better with paracetamol tablets but comes back with discontinuation of the drug. There was history of recurrent sore throat for one year prior to presentation.

Examined; young lady, anxious, afebrile with some dehydration. Throat examination revealed: mild trismus, poor oral hygiene, pooling of saliva, right sided peritonsillar swelling involving the ipsilateral soft palate pushing the stump of uvular to contralateral side. Diagnostic needle aspiration (using size 23G hypodermic needle) yielded 3mls of pus. She was admitted, rehydrated with intravenous fluids, commenced on i.v amoxicillin-clavulanate and adviced for warm saline gargles. General clinical condition improved and she consented for immediate tonsillectomy. Only full blood count and E/U/C were done pre-operatively.

Intra-operative findings were similar to case one above, but tissues were very friable and bleeding was not as much as that of case 1 however dissection was much easier than expected. Post-operatively intravenous fluid was changed to oral first day, and discharged on the second day. Total hospital stay was 4 days. Follow up was same as case 1. Throughout period of follow up there was no throat complaint.

CASE 3

S. S was a 20year old male student who was referred to our clinic from General Out Patient Department with 10/7 history of progressive odynophagia, intermittent fever, difficulty opening the mouth, left otalgia and change in voice. He had a history of an episode of sore throat 6 months prior to presentation for which he had a procedure in a peripheral hospital (? I&D of previous peritonsilar abscess). Examination revealed a young man, febrile with muffled voice. There was right sided peritonsillar swelling pushing the uvular to the contralateral side, mild trismus and pooling of saliva. Diagnostic needle aspirate demonstrated frank pus. An assessment of right peritonsillar abscess with right referred otalgia was made. He was admitted and started on intravenous fluid and antibiotics (amoxicillin-clavulanate). Abscess tonsillectomy was

done on the second day of admission. Intra-operative findings were similar to case 1. Post-operative period was uneventful and he was discharged on 2nd post-operative day. Follow up was same as for other patients.

CASE 4

S. F was a 25year old female student, who presented to our clinic with a seven day history of progressive odynophagia, drooling of saliva and inability to open the mouth fully. There was right otalgia and fever that subsided with paracetamol. Patient's problems persisted inspite of both injectable and oral drugs bought from a patent medicine store. There was a history of an episode of sore throat six months prior to presentation. Examination findings were that of moderate trismus, pooling of saliva, swelling of right peritonsillar area with displacement of the uvular to the contralateral side. A test aspirate using a size 23G hypodermic needle revealed 2.5mls of pus, submandibular lymph nodes were enlarged and tender on the right side. Patient was admitted and was commenced on intravenous antibiotic (amoxicillin-clavulanate) and had immediate tonsillectomy within 48hours of admission. Intra-operative findings were consistent with right peritonsillar abscess. Post-operatively patient improved clinically and was discharged on second post-operative day. Follow-up schedule was similar to case 1 and the follow-up period was uneventful.

CASE 5

S. R was a 45year old male civil servant who presented to our clinic with a history of recurrent sore throat since childhood. About 8 days prior to presentation the symptoms became worse and couldn't respond to the usual medication taken during attacks. Intravenous antibiotics was said to have been administered at home by a nurse without any improvement. Physical examination findings were that of right sided peritonsillar swelling pushing the uvular to left side with associated displacement of the uvular (fig. 1). Test aspirate revealed pus. He was admitted and commenced on intravenous antibiotic (Amoxycillin-clavulanate), full blood count and electrolyte, urea and creatinine were done. He had immediate tonsillectomy after 24hours of admission. Intra-operative findings, post-operative recovery and follow-up schedules

Fig. 1: oropharynx of a 45year old man with right sided peritonsillar abscess

were similar to case 1. Follow-up period was uneventful.

DISCUSSION

Peritonsillar abscess (PTA) is one of the common causes of acute admission in otolaryngology practice. Unilateral PTA has been described since early days of medicine and it usually follows an acute bacterial tonsillitis[11]. Our series buttresses the fact that abscess tonsillectomy is safe and effective. There were no recurrence throughout the 2 years period of follow-up, no septic complications and the intra-operative bleeding was not very different from what we see in non abscess tonsillectomies since none of the patient required blood transfusion. This outcome concurred with the result of Nicolas in Chile[9]. Although quinsy tonsillectomy is not a new procedure, there has been some skepticism in adopting the technique. While it has gained popularity in Europe[9], only 3% of otolaryngologists in Nigeria practice it[10]. Abscess tonsillectomy is economical, safe and effective. It is a simple procedure in which the abscess facilitates dissection because of its location in the dissection plane. Our observed rate of bleeding was not very different from our non-abscess tonsillectomies. There were no septic complications and an average duration of hospital stay was 4 days. Though our patients are rather few, but even large series like that of Templer[12] with 119 patients showed no substantial complications. Of this number only 2 patients' developed post-operative haemorrhage and both were handled conservatively without blood transfusion. Lehnerdt[13], Fujimoto[14] and berry[15] also reported low post-operative bleeding rate in their series. This lack of serious complications and an average hospital stay similar to our scheduled elective tonsillectomies also concur with other studies reported in literature[12]. Rapid diagnosis, prompt and adequate treatment of peritonsillar abscess is very essential in order to prevent both respiratory obstruction and spread of infection to parapharyngeal space[8]. While earlier reports stress the safety of abscess tonsillectomy, later studies focused on efficacy of needle aspiration or incision and drainage[5]. Previously abscess tonsillectomy was indicated in cases not responsive to intravenous medications, needle aspiration and/or incision and drainage.

The limitations of our series are relatively small number of patients and lack of control group to compare abscess tonsillectomy with other modality under the same setting. Inspite of these limitations we recommend that abscess tonsillectomy should be considered in all cases of PTA in a resource constrained environment where patients are poor and specialists are scarce.

In conclusion, abscess tonsillectomy is safe, simple, effective and economical especially in poor communities with inadequate human and material resources.

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CASE REPORT

AGGRESSIVE ANGIOMYXOMA OF THE VULVA IN PREGNANCY: A CASE REPORT AND LITERATURE REVIEW

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SUMMARY

Aggressive angiomyxoma is a rare vulvo-vaginal mesenchymal tumour. We report a case of a 30 year old grandmultiparous patient with a large pedunculated swelling in the right labium major. She was 35 year old Gravida 7 Para 6 patient who was twenty six weeks pregnant. She complained of a painless swelling of the right labium major that existed for three years without any symptom. Clinical examination showed a non-tender 10x10x12cm mass with a 10cm long pedicle. The mass was excised under local anaesthesia. Histopathological examination of the mass indicated it was an angiomyxoma. Aggressive angiomyxoma is a rare soft tissue tumour of the vulva. However, its occurrence in pregnancy is very rare.

KEYWORDS: *Pregnancy, Aggressive Angiomyxoma, Pedunculated, Vulval Mass.*

INTRODUCTION

Aggressive angiomyxoma is a rare soft- tissue tumour that is locally infiltrative and was first described in 1983 by Steeper and Rosai[1]. The neoplasm predominantly affects reproductive age females with a peak incidence during the third decade of life. Clinical presentation as a polyp is rare, with only six such cases being documented in the world literature so far [2]. Oestrogen and progesterone receptors are commonly found in aggressive angiomyxoma, and so they may be hormone- dependent [3]. Hence, they are likely to grow during pregnancy and respond to hormonal manipulation. However, only a few cases of its detection and management during pregnancy are reported in the literature. [3,4]. There have been fewer than 250 cases of aggressive angiomyxoma of various parts reported in the world literature [5,6]. For aggressive angiomyxoma of the vulva, this is among the rarest. No case has been reported in Africa to the knowledge of the authors.

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Here we report a case of a 35 year old woman with pedunculated aggressive angiomyxoma of the vulva at about 26 weeks of gestation.

CASE REPORT

A 35 year old woman G7 P6+ 0 A6 presented to the outpatient clinic of the gynaecology department, and complained of a painless swelling of the right of her vaginal introitus that existed for three years, which enlarged gradually without any remarkable symptoms apart from the discomfort of the existence of the mass. There was no sexual difficulty. On clinical examination,She was anxious, afebrile to touch, not pale, anicteric and not in any obvious distress. The fundal height was 26 weeks uterine size. The mass was polypoidal in nature, non-tender having a soft consistency with normal overlying skin (Figure 1). Routine investigations were within normal limits. The Obstetric scan showed a singleton normal foetus at 26 weeks plus 4 days gestation with a posterior placentation. The mass was surgically excised under local anaesthesia and subjected to histopathological evaluation.

Grossly, the skin covered pedunculated polypoidal mass measured 10x10x12cm in size, wit h a pedicle that measured 10 cm in length. Cut section showed solid gelatinous appearance with no areas of haemorrhage or necrosis (Figure 2).

Microscopically, the tumour is composed of low to moderate cellularity with widely

scattered spindle and stellate shaped cells with ill-defined cytoplasm and variably sized thin and thick walled vascular channels in a myxoid stroma. Focal areas show increased cellularity. The cells have small round to oval hyperchromatic nuclei with small centrally located nucleoli. Mitotic figures were absent (Figure 3).

The patient eventually had an uneventful vaginal delivery of a life baby boy. She has since been on 3 monthly follow up after the initial monthly follow up. This is her second year post excision and there was no evidence of recurrence so far.

Figure 1: *Shows the gross picture of the mass arising from the right labium major with a long pedicle supported on the patients left thigh.*

Figure 2: This shows the excised mass that measures 10x10x12cm in size and a pedicle that measures 10cm in length.

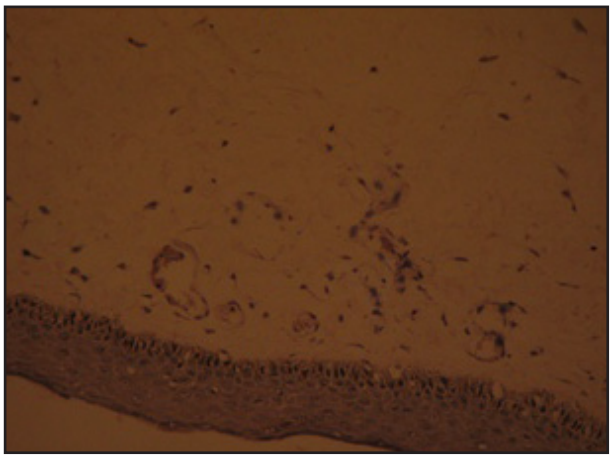

Figure 3: *Histological section of aggressive angiomyxoma of the vulva, showing a medium sized arteriole in close contact with spindle shaped neoplastic cells.*

DISCUSSION

Steeper and Rosai first reported nine cases of pelvic neoplasm, described as aggressive angiomyxoma in 1983 [1]. The term is now widely accepted and in 2003, was classified by the World Health Organization as deep angiomyxoma[7]. At least 100 cases of aggressive angiomyxoma involving the female pelvis or perineum, or both, have been described. At least 14 of these primarily involved the vulva [8]. Its occurrence in retroperitoneum, urinary bladder, vagina and vulva in women and in scrotum, epididymis, testis, inguinal region and bladder in males have also been documented in the literature [9]. The reported male to female ratio is approximately 6: 1[9]. The tumours commonly occur in the reproductive age group but can be seen over a wide range from 16 to 70 years [9]. It is an unusual tumour derived from fibroblast or myofibroblast with nuclei that have no atypical features or mitotic activity. There have been no reported deaths attributed to this tumour [9].

Most patients with aggressive angiomyxoma clinically present with a slow growing mass that is either asymptomatic or associated with regional pain, dyspareunia, or a pressure like sensation[10]. Macroscopically it is a large mass, often greater than 10cm and sometimes larger than 20cm. Small tumours fewer than 5cm in size are less frequent [10]. The lesions frequently have a lobular contour with adherence to fat, muscle and other regional structures. The microscopic appearance of these neoplasms is characterized by a mixture of spindle or stallate cells in a loosely myxoid stroma. The stroma contains collagen fibres and a prominent vascular component containing large, thick walled vessels. Haemorrhage and cysts is not a feature of aggressive angiomyxoma, although micro cystic change may be seen in microscopy. Immunochemically, these tumours express oestrogen and progesterone receptors, thus suggesting that they may be hormone dependent, as rapid growth has been observed during pregnancy [8] just like was observed in the index case.

As this tumour mainly occurs in the reproductive age and seems to grow during pregnancy, there may be hormone dependency. There are only a few cases reported about its coexistence with pregnancy. Fisherman et al [11] reported a recurrence of aggressive angiomyoma of the vulva in pregnancy. Htwe et al [12] reported a 41 year old woman with a Bartholins cyst excised during pregnancy that was reported later as aggressive angiomyxoma. Wolf et al [13] reported a primigravida at 36 weeks gestation with aggressive angiomyxoma of the vulva. Han- Geurts et al [3] reported 3 cases associated in pregnancy. Bagga et al [4] reported a case of aggressive angiomyxoma at 16 weeks of pregnancy. The current case report is the only reportable case of an aggressive angomyxoma of the vulva in pregnancy with a polypoidal growth after a thorough review of available literature from Africa.

Imaging of these tumours is important to determine extent and thus, the optimal surgical approach. Sonography shows a mass that is hyperechoic or appears frankly cystic. Angiography usually shows a generally hypervascular mass. These tumours have a characteristic appearance on CT and MRI and these techniques reveal the extent of the tumour as well [8]. On CT, the tumour has

a well-defined margin and attenuation less than that of muscle. On T2 weighted MRI the tumour has high signal intensity. However, CT or MRI was not done in the index case because of financial constraint.

The optimal treatment for aggressive angiomyxoma is wide local excision with tumour free margin, as this tumour is locally invasive and tends to infiltrate deep into pelvic soft tissues. Pre- operative knowledge of tumour extent is important in determining surgical approach and MRI features of aggressive angiomyxona are characteristic. It is associated with frequent recurrences, probably secondary to incomplete removal. Generally recurrences occur within the first 3 years. Our patient had a wide local excision and is in her second year of follow up and currently free of recurrence.

Radiotheraphy and chemotheraphy are unlikely to be useful adjuncts to primary surgery for aggressive angiomyxoma, because of low mitotic activity, but the use of radiotheraphy to achieve local control or alleviate symptoms has been described[14]. Another treatment modality described is angiographic embolization of the aggressive angiomyxoma. This may help in subsequent resection by shrinking the tumour as well as making it easier to identify from surrounding normal tissues [3]. However recurrences after initial response to embolization may occur as the tumour may already have or develop blood supply from alternate blood vessels [3]. In case of large tumours needing extensive resection, arterial embolization and or hormonal treatment may be used initially followed by surgical resection, the narrow surgical margins is acceptable since resection with wide margins does not appear to reduce recurrences when compared with narrow margins or even incomplete resection [3]. In view of the positive oestrogen and progesterone receptors of some aggressive angiomyxoma, treatment with GnRH agonist has been carried out successfully [6].

Since late recurrences are known, patients should be adequately counselled on the need for periodic follow up so that recurrences can be identified early and treatments offered. The patient presented is still on regular follow up.

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CASE REPORT

TUBERCULOSIS OF THE BREAST: A CASE REPORT

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SUMMARY

Tuberculosis of the breast is a rare form of extra-pulmonary TB and it is usually misdiagnosed as breast cancer or pyogenic breast abscess. Tuberculosis is endemic in sub-Saharan Africa; however, TB of the breast is scarcely reported from the region. We report a case of a 60-year-old Nigerian lady who presented with 6-month history of right breast lump with associated pricking pain, low-grade intermittent evening fever, right axillary swellings, and progressive weight lost. She had history of ingestion of unpasteurized dairy product. Tuberculin skin test done was reactive (18mm) and a trucut biopsy of the right axillary lymph nodes revealed a caseating granuloma suggestive of TB. She was subsequently commenced on 8-month course of standard quadruple anti-tuberculosis therapy under the DOTs programme and remarkably improved.

Tuberculosis of the breast although rare: should be considered as a differential in the diagnosis of a breast lump especially in TB endemic regions of the world. Early diagnosis and prompt treatment will save both patient and doctors unnecessary anxiety.

KEYWORDS: *Tuberculosis, Breast lump, diagnosis*

INTRODUCTION

Tuberculosis of the breast is a very rare form of extra-pulmonary tuberculosis.[1] It was first reported by Sir Astley Cooper in 1829 who called it 'scrufulous swelling of the bosom'. [1] TB of the breast has been reported to constitute only about 0.02-1.04 of breast diseases overall.[2] The incidence of TB of the breast is generally higher in countries with high burden of TB e.g. 4% among cohorts of TB patients in India.[2] Nigeria is one of the 22 countries in the world with highest TB burden.[3] The breast tissue is generally resistant to mycobacterium TB (MTB) infection unlike the lungs and other tissues, because studies have shown that the breast is biologically not a suitable environment for the multiplication of MTB.[1,2,4]

CASE REPORT

A 60-year-old lady was referred from a district hospital with six-month history of right breast swelling associated with pricking pain. The swelling had been gradually increasing in size. No nipple discharge or similar symptoms in her left breast. However, there were swellings in her right axilla and the right side of the neck. In addition, she complained of low-grade intermittent evening fever associated with anorexia, drenching night sweats, and progressive weight loss. No history of cough or other cardio-respiratory symptoms. She had no other systemic symptoms.

She had no sustained close contact with persons with chronic cough, but her younger brother was treated for TB of the cervical lymph nodes about a year prior to development of her symptoms. More over, there was a history of ingestion of unpasteurized cow milk since childhood. She was 10 years postmenopausal, Para 11 + 0 (10 alive); her last childbirth was 20 years prior to presentation. She had never used hormonal contraceptives. She had no family history of breast disease. She is not a known diabetic. On clinical examination the right breast was found to be swollen with peau d' orange appearance of the skin. No nipple retraction or obvious discharge/ bleeding. She had an Ill-defined right breast mass on palpation in the peri-alveolar area extending to the infero-medial area, tethered to the skin, measuring about 10cm by 8 cm in size, non tender, not warm to touch. The left breast was clinically normal. In addition, there were enlarged right axillary and cervical lymph nodes; these were firm in consistency, matted, measuring about 4 cm by 2 cm in size. The left side of the neck and axilla were free. Chest

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examination was clinically normal. Other systemic examinations were normal as well. Trucut biopsy of the right axillary nodes revealed caseating granuloma (fig. 1). Other investigations with their results are shown in table 1 below. A diagnosis of tuberculosis of the right breast was made and the patient was commenced subsequently on quadruple anti tuberculosis therapy based on the Nigerian National TB control/WHO DOTS programmes recommendations i.e. 2- month intensive phase of isoniazid, rifampicin, ethambutol, pyrazinamide continued with isoniazid/rifampicin for another 4 months as continuation phase.

The lady remarkably improved upon completion of her treatment and subsequently discharged for follow up.

Table 1: investigations and their result

Investigation	results
Chest X-ray:	normal
FBC:	
WBC:	14.1 x 10^9/l
Neutrophils:	87%
Lymphocytes:	10%
Monocytes:	3%
PCV:	29%
Blood picture:	Anisocytosis: ++, Microcytosis: ++,
Hypochromia:++, macrocytosis:++, Polychromasia:+	
ESR:	127 mm/Hr
Serum E/U/C	
Na^+:	140mmol/l,
K^+:	3.5mmol/l,
Cl^-:	106mmol/l,
$HC0_3^-$:	20mmol/l
Urea:	7.9mmol/l,
Creatinine	138umol/l
ASAT:	7 IU/l,
ALAT:	4 IU/l
Mantoux test:	18mm (Reactive)
Trucut Biopsy:	caseating granuloma (fig.1)
Abdominal USS	normal finding
HIV screening test:	Negative

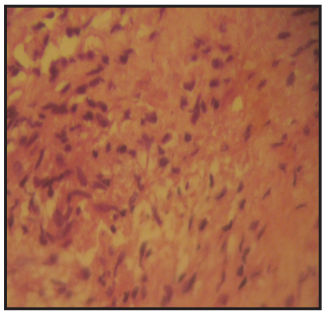

Figure 1: Histologic section of right axillary lymph node showing area of granulomata composed of few aggregates of epithelioid cells surrounded by mantle of lymphoplasma cells. Central areas of necrosis, fibrosis and multinucleated giant cells of Langhan's type are present.

DISCUSSION

Studies have shown that the commonest clinical presentation of TB of the breast are in the form of breast masses with or without nipple discharge or in some cases it can present as a fungating mass.[4-7] This patient presented with a painful lump, although she did not have nipple discharge or an ulcerative lesion on the breast. Reports from the literature have generally shown that Tb of the breast affects women in their reproductive age.[4] This is contrary to our patient who was postmenopausal. A plausible explanation may be differences in predisposing risk factors such as consumption of unpasteurized dairy product or close sustained contact with an index case of TB. In addition, right breast involvement has been reported as the commonest presentation of TB of the breast from the literature; this is similar to our finding.[4] The reason for involvement of the right breast by MTB more than the left is not clear from the literature but anatomical factors like lymphatic drainage or blood supply may play a role. Furthermore, Tb of the breast could be primary or secondary similar to other forms of extra-pulmonary Tb. [5-9]

Studies in India have shown that about 73% of Tb of the breast could be diagnosed by fine needle aspiration cytology (FNAC).[10] However, excisional biopsy is best recommended in order to rule out differential diagnosis such as coexisting malignancy, sarcoidosis, fungal infections or ductular ectasia.[10]

Generally, the DOTs regimen is recommended for the treatment of TB of the breast like any other extra-pulmonary TB. Our patient responded remarkably well to standard anti-Tb therapy under the DOTs programme. She eventually completed her 8-month course of treatment uneventfully. [6]

In special situations such as presence of abscesses or large masses: partial surgical interventions such as drainage of abscess, simple or segmental mastectomy may help.[8]

CONCLUSION

Although tuberculosis of the breast is a rare form of extra-pulmonary Tb it is pertinent to consider it as a differential diagnosis of a breast lump especially in Tb endemic countries like Nigeria. Because early diagnosis and prompt therapy with standard anti-Tb drugs results in a remarkable outcome.

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