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2. Letters to the editor (Up to 400 words).
3. Scientific letters (Less than 600 words); one table or graph and not more than 5 references.
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Acknowledgments

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Books and other monographs:

Murray PR, Rosenthal KS, Kobayashi GS,

Pfaller MA. Medical Microbiology. 4th ed. St Louis: Mosby; 2002.

Editor(s), Complier(s) as Author:

Gilstrap LC 3rd, Cunningham FG, Van Dorsten JP, editors. Operative obstetrics 2nd ed. New York: McGraw-Hill, 2002.

Chapter in a Book:

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Dissertation

Borkowski MM. Infant sleep and feeding: a telephone survey of Hispanic Americans [dissertations]. Mount Pleasantn(MI): Central Michigan University; 2002.

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LETTER FROM THE EDITOR

The Jos Journal of Medicine (JJM) welcomes you to the final edition of our fifteenth volume with a lot of excitement. We welcomed a refreshing editorial on loving your eyes emphasizing the much relegated subject of conscious eye care in the context of prevailing lack of awareness as to the dangers that can befall that sensitive organ suddenly or insidiously! Other interesting articles follow including the experience of physicians around Nigeria during the COVID-19 pandemic, harmful traditional eye practices and predictors of female genital cutting in Nigeria's middle belt state of Plateau.

May I for one last time commend our tireless Editorial Team and ask every member to continue to give their very best to this task. Kudos goes to my Deputy Editor, DrIfiokUmana who though saddled with other assignments availed himself to ensure the progress of our beloved journal. May your path lead to greater heights of service.

We also duly appreciate the leadership of the Association of Resident Doctors (ARD) Jos University Teaching Hospital (JUTH) our host without whom what we do may never be sustained or continued. We wish President NaponNalda and his formidable team of executives a brilliant future gilded with many more opportunities to serve and lead.

Finally, we thank our esteemed authors and you, our readers, for your high regard of and interest in our journal which remains indexed in the African Journal Online (AJOL). Articles and other correspondences can be sent to us via the email; editorjjm@gmail.com.

Thank you as always for choosing the Jos Journal of Medicine, please enjoy the read!

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CONTENT

LOVE YOUR EYES – ACHIEVING SELF-AWARENESS OF EYE HEALTH (WORKING TITLE: EZE ET AL.: LOVE YOUR EYES)

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According to the International Agency for the Prevention of Blindness (IAPB), almost everyone on earth is likely to have an eye health challenge in their lifetime.[1] Eye conditions manifest in various ways and affects people of every age group, race, economic status, gender, and creed, require expert evaluation. They include refractive errors (popularly known as long-sightedness or short-sightedness), cataracts, glaucoma, allergic conditions, ocular infections (such as conjunctivitis, epidemic adenoviral conjunctivitis popularly called apollo locally, trachoma, and onchocerciasis or river blindness), inflammatory conditions, eye injuries, age-related macular degeneration, diabetic and hypertensive eye diseases, squint, sickle cell-related eye conditions, and cancers. While some of these problems manifest as mere discomfort, others may be associated with significant morbidity and, even, mortality.

Globally, 2.2 billion people are visually impaired and may require specialist care.[1] However, the utilization of eye care services is somewhat poor. Olusanya et al[2] in Ibadan, Nigeria, reported that only about 24% of people with visual impairment ever sought orthodox care, and the main reason was the perception that eye problems were not severe enough to warrant seeking specialist care. This wrong perception may result in avoidable blindness. In Nigeria, one in every 25 people aged 40 years and older is blind, and 84% of this blindness could have been prevented or treated.[3,4]

World Sight Day is an international day of awareness observed annually on the second Thursday in October. It aims to raise public awareness and foster local involvement in the prevention of blindness. The theme for 2021 is "love your eyes," and it highlights the need for self-awareness of eye health and strategies to achieve this. It also recognises that everyone counts and should, therefore, be involved if the fight against avoidable blindness is to be won. As a result, a global drive was initiated to encourage a million people to be proactive about their eye health by taking a sight test at prescribed intervals or caring for their eyes. Ideally, every healthy individual should have a comprehensive eye examination by an ophthalmologist once in two years if less than 40 years and yearly if above 40years.[6] However, people with risk factors such as glaucoma or a family history of glaucoma, diabetes, hypertension, dyslipidemia, high or degenerating myopia, and age-related maculopathy, may require more frequent evaluation to detect any problem early. It is necessary for people who have or are at risk of developing an eye disease to follow the recommended schedules for periodic reviews by ophthalmologists.[6]

The IAPB proposes a four-pronged strategy for caring for the eyes (the four Ps) - prevent vision loss by adopting a healthy diet and lifestyle, protect the eyes from harmful substances and habits at home and in the workplace, preserve eyesight by ensuring regular comprehensive eye examinations and adhering to the recommended management plan (e.g. using prescribed glasses), and prioritise

eye health by including eye examination in routine medical checks, and educating friends and family to do same.

Conclusion

A majority of the causes of blindness and visual impairment can either be prevented or treated. Therefore, being proactive about eye health can ultimately save sight. All hands must be on deck to ensure that everyone is willing and able to access eye care because everyone counts. Finally, pledge to *"love your eyes"* and spread the message to everyone around you.

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FIBROUS DYSPLASIA IN THE CRANIOFACIAL REGION: A RETROSPECTIVE REVIEW OF CASES TREATED IN A TERTIARY HOSPITAL, NORTH- WEST NIGERIA.

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ABSTRACT

Background study: Fibrous dysplasia (FD) is a rare bony disorder in which normal bone is replaced by abnormal fibro-osseous tissue. It often involves the long bones, craniofacial bones, ribs, and pelvis. It often occurs in the first and second decades of life. We, therefore retrospectively review cases of fibrous dysplasia of the craniofacial region treated in our Centre.

Objective: To present the clinical features, radiological appearances and treatments of craniofacial fibrous dysplasia.

Methodology: The study was a retrospective review of case files of patients that were treated in our Centre for fibrous dysplasia of the craniofacial region from January, 2009 to October, 2021. Records of patients were obtained from clinic register and operation register. The case folders of the patients were retrieved and analyzed for age, sex, site, clinical features, radiological findings and treatment received.

Results: Thirty-three cases were included in the study. Majority of the cases occurred in the age group 11 – 20 years (n=22, 66.7%), the least affected was age group 51 - 60 (n=1, 3.0%). Females were more affected (n=20, 60.6%) than males (n=13, (39.4%) at the ration of 1.5:1. The maxillae was most affected (n=21, 63.7%), then mandible (n=11, 33.3%), the cranial bones were least affected (n=1, 3.7%). Surgical excision was the modality of treatment for all our cases.

Conclusion: Fibrous dysplasia causes facial disfigurement and surgical excision is the ideal treatment with excellent outcome. CT scan, radiographic examination of the lesion before surgery and histopathology of excised tissue are crucial to its diagnosis.

Keywords: Fibrous dysplasia, mandible, maxillae, fibro-osseous, cranial bones.

Introduction

Fibrous dysplasia (FD) is a rare, non-malignant condition in which normal bone and marrow are replaced by fibrous tissue and randomly distributed woven bone.[1] The tumour is usually accompanied with pain, bony deformity, and pathologic fractures.[1,2] Lichtenstein in 1938 first named the lesion fibrous dysplasia (FD).[1] FD presents clinically in three forms namely: monostotic (single bone affected) , polyostotic (multiple bones affected), and polyostotic with endocrinopathies, which can be associated with hyperpigmentation and endocrinological disorders and is called McCune-Albright syndrome.[3] This tumor is mainly bony disorder and common sites of skeletal involvement are: the long bones, craniofacial bones, ribs and pelvis. Monostotic FD (MFD) has relatively high frequency of occurrence in the jaws compared to the other types of FD.[4]

However, FD is caused by somatic activating mutations of the gene GNAS in a subunit of the stimulatory G protein, located at 20q13.213.3.[5,6] The diagnosis of FD is based on clinical, radiological, and histopathological examination. A radiological feature shows a ground glass appearance. Many researchers[5-7] reported that FD is commoner in teenagers, and it usually becomes static after adulthood.[5] It commonly affects females more than males.[6] Jaw lesions cause displacement of teeth, malocclusion, loss of lamina dura, narrowing of the periodontal ligament space, and rarely root resorption.[4] Nasal obstruction may occur if paranasal sinuses are affected. Lesions extending to the orbit may cause visual impairment and temporal bone lesions may cause hearing loss.[4,5] Facial pain, headaches, or facial numbness may develop more in craniofacial FD.[5]

Moreover, FD involves the maxilla almost two times more often than the mandible.[4-6] It frequently appears in the posterior region of the jaw bone and is usually unilateral.[5] There are different treatment approaches to FD which include observation, medical treatment, and surgical treatment. This study reviewed cases of craniofacial FD treated in Barau Dikko Teaching Hospital, Kaduna, North-west, Nigeria.

Methodology: This was a retrospective study of cases of craniofacial fibrous dysplasia in the skull and jaws that were treated at the Maxillofacial Clinic, Barau Dikko Teaching Hospital, Kaduna, Nigeria, from January, 2009 to October, 2021. The sample frame was thirty-five. The sample size was thirty-three. Two patients whose records were inadequate were excluded from the study. Records of patients were obtained from clinic register and operation register. The case folders of the patients were retrieved and analyzed for age, sex, site, clinical features, radiological findings and treatment received. Data were sorted, organized and entered into SPPversion 20(IBM^0 SPSS^0 statistics Armonk New York, United States) for analysis. Frequency statistics and cross tabulations were done and chi-squared test was used to test for significance between variables at the critical $p<0.05$.

Clinical presentation of FD:

Facial asymmetry was a common presentation, both labial and lingual bone expansion in the maxillae and mandible were common (Figure 1). Malocclusion was observed in few cases. The overlying mucosa had normal color and appearance. One case of polyostotic FD with cranial bones involvement (temple and occiput), also had multiple skin pigmentations but no abnormal neurological findings.

Radiological features:

Radiographic examination revealed a lesion with both radiopaque and radiolucent features showing a ground-glass appearance, there was buccal and lingual bone expansion. Panoramic radiography and plain radiographs of the jaws were all useful in the diagnosis of FD. Computerized Tomography scan was a useful imaging technique for CFD. CT scan of CFD imaging showed expansive mass with ground-glass opacity involving the mandible, maxilla, temporal bones and occiput.

Histological features: Macroscopic features showed a grayish solid mass, Histopathology revealed that the tumor was composed of a solid proliferation of spindle-shaped cells associated with islands of osteoid and bone trabeculae. The trabeculae of woven bones had irregular size, form, and distribution.

Results:

TABLE 1 : AGE DISTRIBUTION

AGE/ YEARS	NO OF CASES	PERCENTAGE
11-20	22	66.7
21-30	5	15.1
31-40	3	9.1
41-50	2	6.1
51-60	1	3.0
TOTAL	33	100

TABLE 2 : SITE AND SEX DISTRIBUTION

SITE	SEX M	SEX F	TOTAL NO OF CASES	PERCENTAGE BY SITE
Maxillae	9	12	21	63.7
Mandible	4	7	11	33.3
Cranial bones	-	1	1	3.0
Total	13	20	33	100

Results: Thirty-three cases cases were included in the study. Majority of the cases occurred in the age group 11 – 20 years (n=22, 66.7%), the least affected was age group 51 - 60 (n=1, 3.0%) (Table 1). Females were more affected (n=20, 60.6%) than males (n=13, (39.4%) at the ratio of 1.5:1 (Table 2). The maxillae was most affected (n=21, 63.7%), then mandible (n=11, 33.3%), the cranial bones were least affected (n=1, 3.7%) (Table 2). Surgical excision was the modality of treatment for all our cases.

Figure 1a: A 16 -years old boy with maxillary tumour

Figure 1b. The excised tumour

Figure 2a. A 12-years old girl with tumour of the maxillae

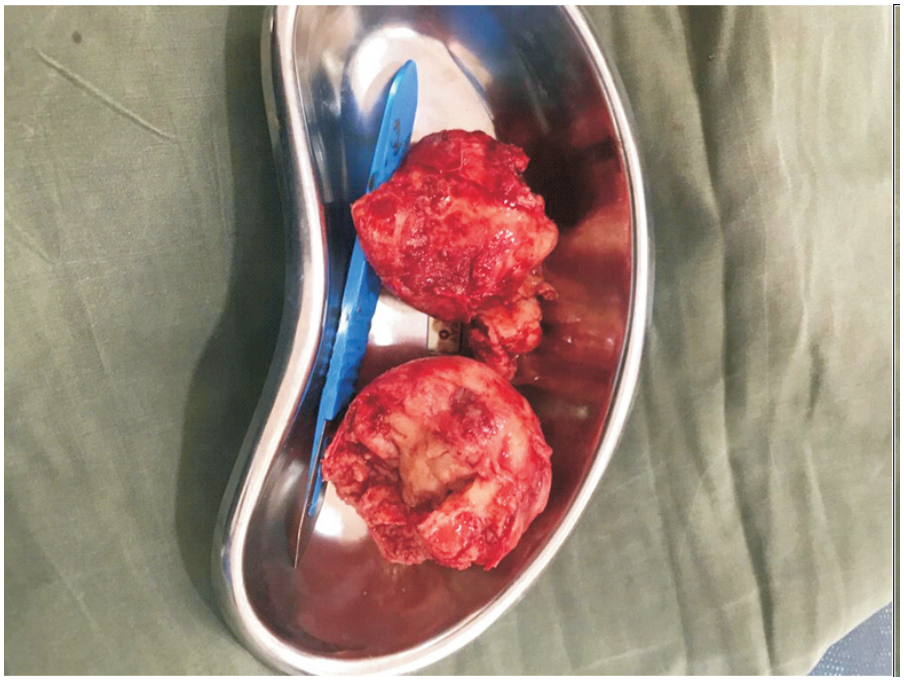

Figure 2b. The excised Tumour

Discussion

Fibrous dysplasia (FD) is a benign fibro-osseous bone dysplasia that can involve single (monostotic) or multiple (polyostotic) bones.[7] Monostotic form is more frequent in the jaws.[9] It is termed as craniofacial fibrous dysplasia, when it involves, though rarely, adjacent craniofacial bones. Majority of our cases were monostotic (96.9%) involving either the mandible or the maxillae. One case of polyostotic FD (3.1%) was reported in our study. This further supported other researchers that reported rarity of polyostotic type.[5,6]

The maxilla is more commonly involved than the mandible in monostotic jaw bone lesions.[8,9] This study reported that the maxillae was more affected than the mandible in the ratio of 1.9 to 1.0 (Table 2). Our cases that involved the mandible were located more in the anterior region than posterior. The maxillary lesions were more in the posterior region (Figure 2). Most of our cases had bucco-lingual expansion either in the maxillae or the mandible. The lesion presented with varied sizes which ranged from few millimeters to massive tumor. The most common symptoms of our cases were: facial deformity with asymmetry, nasal congestion, malocclusion, dental anarchy, pains and few with pus discharge from the lesion (Figure 1). FD can occur at any age, but more common in children and young adults.[9,10] However, our study showed that children in their second decade of life were most affected (66.7%), but elderly were also affected but very low incidence (Table 1). Several authors[4-7] had reported that FD had female predilection, our study supported this claim with the report of female to male ratio of 1.9 to 1.0. However, in some other studies, no gender predilection was found.[11,12]

Moreover, some researchers [11,12] had claimed that FD progress slowly and ceases after puberty or bone maturation, whereas others[7,9,10] reported, that FD continued to progress into old age. This study could conclude that FD progresses to old age as one of our female cases presented at age of 56-years with a maxillary lesion.

However, the radiographic appearances of FD of the jaws in this study ranged from radiolucent to radio-opaque, mature tumor showed waves of radio-opacities appearing in ground glass pattern. Several authors[7,8] had reported three different radiographical patterns which were: cystic (radiolucent or lytic), sclerotic, and mixed (radiolucent/radiopaque). Our study also agreed with this findings, early lesions presented as radiolucent lesion, while those lesions that were age 2 to 4-years duration presented as mixed radiolucent and radio-opaque, long duration of 12-years were hyperdense radio-opaque (sclerotic).

The differential diagnosis of FD includes: osteoma, ameloblastoma, cementoma, cementifying fibroma, benign odontogenic tumour, simple bone cyst, non-ossifying fibroma, osteofibrous dysplasia, low grade intramedullary osteosarcoma, and Paget's disease. The diagnosis of FD is confirmed with histology, but radiographic findings could be of great assistance. Treatment protocols for FD as suggested by an author[14] include: observation, medical treatment, and surgery. Clinical observation is suggested for FD lesions that have no risk of pathologic fracture or facial deformity.[14] Medical treatment with bisphosphonates may have benefits including improvement of function, pain relief, and lower fracture risk for appropriately selected FD patients.[14,15] All our cases had radical excision of the tumor to prevent recurrence. Tumor recurrence was reported in two of our cases. The first excised tumor gave histolology of FD, but after second surgery the histology was ameloblastoma. This greatly proved that histological diagnosis was not absolutely reliable. There were associated morbidities following surgery, such as oro-antral fistula, loss of dentoalveolar segment and phonation defect. Prosthesis was fabricated for the patients to improve oral function defects. In conclusion FD could be described as non-life threatening tumour as all our cases had complete recovery from the lesion.

Limitations: Patients were not keeping to follow up appointment which made long term evaluation of our treatment modalities impossible. All our cases were treated with surgery whereas there are other modalities of treatment such as observation, medication with bisphosphonates and surgical reduction of the tumor.

Consent: Patients gave their consent for their images and other clinical information to be reported in the journal.

Conflict of interest: None

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EXPERIENCE OF NIGERIAN PHYSICIANS DURING THE COVID-19 PANDEMIC, A QUALITATIVE STUDY

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ABSTRACT

Introduction: The COVID-19 pandemic has affected healthcare workers in Nigeria including. This has caused several problems and has affected the psychological of the frontline workers. Also due to the shortage of supplies such as the N95 facemask and personal protective equipment (PPE), has led to the reuse and sterilization of medical supplies manufactured as disposable materials.

Objectives: To investigate the experience of doctors during this trying time of their career

Methodology: This is part of a larger study. An open-ended question was asked at the end of the questionnaire if respondents had any comment about COVID-19.

Results: a wide range of responses were given which was analyzed into themes.

Conclusion: Doctors need support, there is also a need to address other infectious diseases that are ravaging Nigeria and the African continent.

INTRODUCTION

The corona virus-2019 abbreviated as COVID-19 is a global health emergency that has affected several countries. A disease that spreads globally is known as a pandemic[1]. It started in late 2019 and has caused a great impact and change worldwide[2] infecting people worldwide[2-5]. Since the influenza pandemic that occurred in 1919, COVID-19 is the first pandemic that has affected the respiratory system[5].

The first case of COVID-19 in Nigeria was diagnosed on the 28th of February 2020 by an Italian. Since then the numbers have been rising. As of 25th April 2021, the number of cases in Nigeria was 164,756 with 2,062 deaths according to worldometer[6]. As of August 2020 in Nigeria, 2175 healthcare workers have contracted the SARS-CoV2 and 122 healthcare workers in Rivers State from 97 public and 25 private hospitals[1]. By the 11th of August 2020 in Rivers State, Southern Nigeria, three healthcare workers died of COVID-19 with 106 healthcare workers had contracted the novel virus[1]. More than 10,000healthcare workers in Africa have been infected with the SARS-CoV-2 from 40 countries and globally 10% of the people infected with COVID-19 are health workers[7]. During any disease outbreak, a serious problem is healthcare workers contracting the infection at the medical workplace[4]. The role played by healthcare during the COVID-19 pandemic in curtailing the novel virus cannot be overemphasized[3,8-10]. Several people have been infected globally[8].

In any country, healthcare workers are vital resources they possess therefore the workforce in the health sector should be placed in high priority[4]. Physicians globally are working hard to curtail the spread of the disease, even in Nigeria. The pandemic has also put a lot of strain on the health systems and healthcare workers have been drafted to work in facilities dedicated to COVID-19 quarantine and treatment centres[4,5,11]. This has hurt healthcare professionalsincluding physicians which include emotional and physical impact[1-4]. The effective response to the COVID-19 pandemic is made by doctors[12]. This is because they are on the frontline in the fight against COVID-19. Physicians are the ones who have conducted several studies on COVID-19 to identify its symptoms and signs, clinical manifestation and laboratory diagnosis, treatment and even the discovery of vaccines. As doctors are caring for patients infected with this infectious disease, they can also contract the virus from their patients as COVID-19 is now an occupational hazard at the medical workplace. There are several impacts of the COVID-19 pandemic as people get infected including economic and psychological consequences.

Healthcare workers working in the frontline are the worst hit b medical, mental and psychological impacts of the COVID-19 pandemic[9,12,13]. Some of the doctors drafted to work in the COVID-19 treatment centres do not have any expertise in the management of infectious disease[4]. Physicians are affected mostly by the medical and psychological impact of COVID-19[2]. Healthcare workers are at risk of contracting infections and diseases in the cause of their work that is why universal precautions must be practiced always. This causes physicians to be highly vulnerable to COVID-19 and also transfer it to their patients[14]. This worsened due to the global shortage of personal protective equipment (PPE). Therefore PPEs must be provided continuously with training on infection prevention and control procedures[13]. Healthcare workers are certainly important in healthcare delivery especially during the challenging times of COVID-19. This pandemic has caused a lot of changes in healthcare systems globally and several healthcare workers have been infected including doctors[15].therefore it is vital to evaluate the experiences of physicians during the COVID-19 pandemic ranging from infection prevention and control procedures, psychological and emotional impacts of COVID-19 and burnout among doctors during the COVID-19 pandemic.

Research Methodology

This is a qualitative and pilot study on the experience of doctors working in Nigeria during the COVID-19 pandemic. It is part of a larger study on infection prevention and control procedures among doctors in Nigeria. This study comprised of structured questions and an open-ended question if the research participant had any comment on the topic. The responses were analyzed into themes. The study was web-based and a self-administered questionnaire was administered to research participants using social media platforms. The inclusion criteria for this study was doctors and

dentists working in Nigeria while other categories of health professional working in Nigeria and physicians of Nigerian descent practising outside the shores of Nigeria were excluded from this study. The research was approved by the National Health Research Ethics Committee of Nigeria (NHREC) with the ethical approval number NHREC/01/01/2007-25/08/2020

Results

This study was conducted in 2020 among 23 doctors practising in Nigeria. Table 1 shows the demographic profiles of the research participants. The majority of the research participants 53.2%(12), were of the age range of 35-44 years. All the respondents work in a hospital located in urban cities.

Table1: Socio-Demographic Profile

The age range in years	N (%)
25-34	7(30.4%)
35-44	12(53.2%)
45-54	3(12.0%)
55-64	-
≥ 65	1(4.3%
sex	N(%)
female	12(52.2%)
male	11(47.8%)

Comments on infection prevention and control on COVID-19 was made by 32 doctors residing and practising in Nigeria. The socio-demographic profile of the research participants is outlined in Table 1.Table 2 shows the thematic responses of the research participants.

Table 2: Responses of research participants

S/N	Theme	Quotations
1	Need for preparedness for emerging and re -emerging diseases	'We should do more and be prepared to handle and manage other emerging and re-emerging disease' ‘Nigeria need more clinical infectious diseases experts’ ‘Healthcare in Nigeria needs an overhaul’
2	Importance to conduct studies on COVID-19 impact on doctors	' I am currently one of the COVID -19 case managers and it gives me joy seeing my patients bounce back to good health after few days by treatment'
3	Poor support and improved welfare for healthcare professionals	‘Would this review be used to improve the quality the quality of welfare of health workers or it is for academic purposes?’ ‘Nigerian government have to sit up at every level’ ‘There is poor support for health workers who caught COVID’ ‘Although the hospital where I work has provided the training and facilities to work with COVID -19, they have failed in staff recruitment and compensat ion. Doctors recruited still have to carry their routine work, increasing their stress levels putting a wider population at work’ 'I think will help to identify how well different centres are doing and how much support as much as the awareness they have' ‘I feel there should be more mental health support for healthcare workers’
4	Neglect of tropical diseases	'Africa and Nigeria need to focus more on tropical issues like water-borne diseases, malaria, and community health and safety
5	Adherence to infe ction prevention and control measures always	‘Isolation centre staff should not think of protecting themselves alone but try to prevent t he spread from one patient to another while at work by regularly changing their gloves and disinfecting shared equipment' ‘Infection prevention and control measures should be adhered to always’
6	Provision of personal protective equipment	‘Heads of hospitals should take responsibility for providing adequate PPE for their staff and provision of conducive environment’ ‘The hospital where I work are not concerned about the protection of healthcare workers. Doctors have to personally buy PPE such as the N95 facemask, face shield, hand gloves, soap, etc’ ‘Measures should be put n place to strongly protect frontline workers as this is not the case in my health facility’

Discussion

Healthcare systems globally are challenged by the COVID-19 pandemic[4]. Respondents gave a wide range of responses which was categorized into six themes. A wide range of responses was given for the importance of health systems to be prepared always for the emergence of any new or novel disease as it can be a public health emergency and a threat to the entire populace. It is also necessary at this time to conduct studies on the impact of COVID-19 on doctors.

Doctors are on the frontline in the war against the novel virus. Poor support for healthcare workers in Nigeria during the COVID-19 pandemic and therefore there should be improved welfare. One of the respondents asked a question if the result of the study is merely for academic purposes or it will be used to improve the welfare of doctors. During this pandemic, so much resource has been spent on COVID-19, therefore, neglecting tropical diseases in Nigeria. Tropical diseases have been the cause of morbidity and mortality before the emergence of the COVID-19 pandemic. They seem to have been neglected as everyone is now focused on the ongoing pandemic. Infection prevention and control measures is an important aspect in the control, curtailing and trying to end the pandemic which in the end will have a positive effect on the morbidity and mortality of COVID-19. PPE is necessary for adherence to infection prevention and control measures. PPE are important in the management of patients with severe acute respiratory syndrome coronavirus-2.

The world is trying to adapt to the new normal caused by the COVID-19 pandemic due to some of the preventive measures put in place to curtail the spread of the novel virus. Healthcare workers including physicians are not spared as they are the worst hit whether or not that they are working in isolation centres or health facilities dedicated to the management of patients with infectious disease. Any doctor who has contact with sick patients is at risk of contracting it from that patient. Healthcare workers need to access updated information on the risks faced by healthcare workers as the disease is evolving rapidly[15]. Hence it is necessary to conduct studies on COVID-19 amongst doctors and other categories of healthcare professionals. It is also necessary as healthcare workers are the front lines in the fight against the COVID-19 pandemic[16]. Doctors need to be prepared always for any emerging diseases. This is because physicians and all healthcare workers are important in the health workforce in the infrastructure of the health systems[17]. According to this study, healthcare workers need support and improvement in welfare, especially mental health and social support. Mental health support is very important for healthcare workers who have been infected with COVID-19 according to one of the research participants who had been infected with COVID-19. Healthcare workers can become psychologically distressed by battling with COVID-19[13]. Other qualitative studies conducted on COVID-19 have revealed that healthcare professionals are vulnerable to mental health problems during the COVID-19 pandemic such as depression, stress, anxiety and stress is more among healthcare workers working in the frontline[18].

According to Mbange et al (2020), social support is necessary especially for healthcare workers who are battling with emotional challenges during the COVID-19 pandemic[15]. This is similar to studies conducted in Bayelsa State, Southern Nigeria, where respondents in this study had a low level of motivation and were afraid of contracting the virus at their workplace[19] and a qualitative study in which physicians working in the COVID-19 dedicated centre in Pakistan faced physical and psychological distress[3]. For sustainable delivery of healthcare during the COVID-19 pandemic, mental and physical health and well being of healthcare professionals is vital[20].

According to this study, the welfare of healthcare workers especially doctors and nurses have been neglected. Doctors need to be supported in their work especially at this challenging time. Personal protective equipment is important in protecting the healthcare workers and also infection prevention and control measures cannot be adhered to without PPE.

The poor attitude to work by some healthcare workers during the pandemic may be due to a lack of support from the health managers and medical chief executives[21]. Despite the global shortage of PPE, healthcare workers need to protect themselves always and also practice infection

prevention and control measures always including practising universal precautions as it will prevent patient to doctor, and the doctor to patient transmission of the novel virus[1,22]. Doctors both physicians, trainees and medical students are confronted with challenges in the course of their work[23] that can lead to moral distress that affects their mental and physical health, especially during the COVID-19 pandemic.

Conclusion

The COVID-19 pandemic has several impacts on the world and physicians are not exempted. Hence it is necessary to conduct studies amongst healthcare workers and COVID-19 as they require support and their welfare needs to be improved. Doctors need to be prepared for any emerging and reemerging diseases. During this difficult time, the pandemic, tropical diseases which led to morbidities and mortalities have been neglected. Healthcare workers need to adhere to infection prevention and control measures and healthcare workers need to have access to PPE in the course of their work.

Author contributions:

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PREDICTORS OF FEMALE GENITAL MUTILATION AMONGWOMEN OF REPRODUCTIVE AGE IN PLATEAU STATE, NIGERIA

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ABSTRACT

Background: Despite being promoted as a highly valued cultural practice and social norm, female genital mutilation (FGM) is internationally recognized as a gross abuse of the rights of girls and women, and it is associated with adverse health and social consequences along withhuge economic costs. This study was aimed at determining the factors associated with FGM among women of reproductive age in Plateau State, Nigeria.

Methods:
Analysis of secondary data obtained from the Nigeria 2016 - 17 Multiple Indicator Cluster Survey (MICS) dataset was done. The survey collected data on samples of women within the reproductive age group (15-49years) using a two-stage sampling technique, information was electronically captured using computer-assisted personal interviewing. The data
set for Plateau State was extracted and analyzed using the Statistical Package for the Social Sciences version 23.

Results: There were a total of 1172 interview entries in the data set, however only 247 had filled responses for the question: "ever been circumcised?", the remainder (78.9%) of the entries reflected as missing cases. The mean age of the respondents was 29.5yrs ± 9.3yrs, 63.6% were married or in a union, 86.6% ever attended school, 64.4% were dwelling in a rural area and 76.1% felt the practice of FGM should be discontinued. Forty (16.2%) respondents reported been circumcised. The odds of being circumcised were significantly higher for the younger age group (15 – 23 years), those without a formal education, belonging to a middle wealth quintile, and women wanting the practice of FGM to be continued (p ? 0.05).

Conclusion: A significant proportion of women of reproductive age in Plateau State are circumcised. Therefore, there is a need to further improve extant efforts addressing FGM including awareness creation on its adverse consequences especially among the younger women, the uneducated, and the poor.

Keywords: Predictors, Female genital mutilation, Women of reproductive age, Plateau State

INTRODUCTION

Female genital mutilation (FGM) also known as female genital cutting or circumcision is defined as "all procedures that involve partial or total removal of the external female genitalia, or other injuries to the female genital organs for non-medical reasons". Although FGM is predominantly performed by traditional circumcisers, the practice has been medicalized in some settings where healthcare workers are reported to perform it believing that it makes the procedure safer. Different types of FGM exist ranging from partial or complete removal of the clitoris, the inner and outer folds of the skin of the vulva tothe narrowing of the opening of the vagina and pricking, piercing, incising, scraping, and cauterizing of the female genitalia.Because FGM is mostly carried out as a cultural obligation and the victims are often

INTRODUCTION

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Globally, over 200 million girls and women have suffered FGM in 30 countries across Africa, Asia, and the Middle East where the practice is rife, in these countries, managing the health consequences of FGM costs in totalabout 1.4 billionUS dollars annually. Going by the current trend, at least 3 million girls are estimated to be in danger of being circumcised yearly.An additional one to two perinatal deaths per 100 deliveries has been attributed to FGM.Although FGM is a global practice, the practice is commonest in the Western, Eastern, and North-Eastern regions of the African continent. Two out of the three countries that account for more than half of the global burden of FGM are in Africa; Egypt and Ethiopia, meanwhile Nigeria ranks third in Africa for the total number of girls and women circumcised.Between 2004-2015, about 25% of women aged 15-49 years in Nigeria had been circumcised, despite this, more than a third (36%) of women and men within the reproductive age bracket in the country were either ambivalent towards the discontinuation of the practice or outrightly indicated it should be continued. Nigeria is a party to several global commitments seeking to end FGM, such as the 2012 United Nations General Assembly resolution calling on the global community to step up efforts to end the FGM, and the Sustainable Development Goals (SDGs) where target 5.3seeks to eliminate all harmful practices including FGM by the year 2030. Furthermore, the Nigerian government has prohibitedthe practice of FGM and prescriped sanctions as contained in the Violence Against Persons Prohibition Act (VAPP) of 2015,additionally, the National Policy and Plan of Action for the Elimination of Female Genital Mutilation in Nigeria 2013-2017 seeks to: eradicate the medicalization of FGM by 2015, reduce the proportion of girls and women undergoing FGM to less than 5% by 2017, and reduce the proportion of women who support the continuation of FGM to less than 2% by 2017.Nonetheless, the country has seen only a 5% drop in FGM rates between2013 and 2018, from 25% to 20%, a decline that is insignificant because it leaves the prevalence unacceptably high and far from the national target.Regrettably,circumcised women in Nigeria seem to rationalize FGM by believing that the procedure is obligatory by religion, while in Plateau State a significant proportion (30.5%) of women are either ambivalent or not in support of legislation against FGM.

Previous studies in sub-Saharan Africahave revealed sociodemographic characteristics and contextual factors to be associated with the odds of a woman being circumcised, these factors include age, marital status, parity, literacy and educational status, employment status, occupation, ethnicity, religion, household wealth quintile and place of residence.[""]

Although Plateau State is one of the 21 states in Nigeria that have domesticated the VAPP law, the act is yet to be assented to by the executive.No published study in Plateau state has explored the predictors of FGM in the state, therefore, the findings from this study will provide information

on the correlates of the practice and as a result, indicate opportunities for curbing the ugly act. The objective of this study was to determine the predictors of FGM among women of reproductive age in Plateau State, Nigeria.

METHODS

Study area

Plateau State is located in north-central Nigeria and is the twelfth largest state in the country, it is bordered by the following states: Kaduna, Bauchi, Nasarawa, and Taraba states. There are 17 Local Government Areas in the state spread across three senatorial zones. The state has an estimated population of over 4 million people and there are over forty indigenous ethnic groups in the state, however, people belonging to other ethnicities from other parts of the country such as Hausa, Igbo, Yoruba, and Idoma also reside in the state. The predominant occupations are farming, mining, trading, and civil service in the public and private sectors. Women of reproductive age constitute nearly a quarter (24%) of the entire population of the state. Plateau state has an estimated total of 1470 health facilities; of which 85.1%, 14.5%, and 0.4% are primary, secondary and tertiary respectively, more so, 73% and 27% are public-owned and private-owned health facilities respectively.Akin to other parts of Nigeria, people in Plateau utilize different forms of healthcare including orthodox medicine, faith belief healing **system**, and traditional **medicine**.

Study design

This study used secondary data obtained from theNigeria 2016-17 Multiple Indicator Cluster Survey (MICS).The Nigeria MICS, a part of the global MICS programme which was developed by the United Nations Children's Fund (UNICEF)about 30 years ago as an international household survey programme aimed at supporting countries to collect internationally comparable data cutting across a wide range of indicators on the situation of children and women, is a nationwide cross-sectional survey that is a primary source of information on women of reproductive age (15-49 years) and children. The 2016-17 survey was the fifth round of the MICSand it was carried out between September 2016 and January 2017by the National Bureau of Statistics with support from the UNICEF, World Health Organization, United Nations Population Fund, Bill and Melinda Gates Foundation, Save One Million Lives and the National Agency for the ControlofAIDS. The survey essentially provides data for establishing baseline and monitoring progress toward goals in global and national commitments such as the SDGs. The data was collected using computer-assisted personal interviewing.The dataset and permission to use it were obtained from the UNICEF MICSprogramme through its website:https://mics.unicef.org/surveys.

Sampling technique

In each state, respondents in the 2016-17 MICS were selected viaa two-stage sampling involving in the first stage the systematic selection of 60 enumeration areas (EAs)while the second stage was the systematic selection of 16 households drawn from each selected EA. More details on the description of the study design and sampling can be found in Appendix A of the Nigeria MICS 2016-17 survey findings report.

Statistical analysis

Analysis was done using the Statistical Package for the Social Sciences version 23, at a significance level of $p \leq 0.05$, following the extraction of the dataset for Plateau state. Three levels of statistical analyses were done: firstly univariate analysis was used to describe the sociodemographic characteristics of the respondents and the prevalence of FGM using frequencies and proportions, the second was a bivariate analysis using chi-square test to explore statistically significant association between the explanatory variables (individual-level factors: age group, marital status, school attendance, highest educational level, ethnicity, childbirth status, awareness of FGM, wealth quintile and the thoughts towards the continuation of FGM, and the contextual factor - the place of residence) and FGM, and lastly, a multivariable logistic regression analysis was used todetermine which of the explanatory variables found to be statistically significant in the bivariate analysis are predictors of FGM. The strength of association between a predictor explanatory variable and FGM while controlling for the effect of other variables was expressed as an adjusted odds ratio (AOR) at a 95% confidence interval (CI).

RESULTS

There were a total of 1172 interview entries in the dataset, however, only 247 had valid responses for the question: "ever been circumcised?", the remainder of the entries (925)reflected as missing cases.

The mean age of the respondents was 29.5 ± 9.3years and the majority (63.6%) of the women were married or in a union, 82.6% had a formal education of atleast a primary level, the richest wealth quintile had the highest proportion (31.2%) of respondents, most of the women (64.4%) resided in a rural area and majority (76.1%) want the practice of FGM to be discontinued. Forty (16.2%) of the respondents reported been circumcised (Table 1).

Table 1: Sociodemographic characteristics and prevalence of FGM among women aged 15–49 years in Plateau State, Nigeria(n= 247).

Variables	Frequency	Percentage
Age group (years)		
15 – 23	77	31.2
24 – 32	80	32.4
33 – 41	61	24.7
42 – 49	29	11.7
Mean age ± standard deviation years		29.5 ± 9.3
Marital/union status		
Currently married/in union	157	63.6
Formerly in married/in union	7	2.8
Never married/in union	83	33.6
Ever attended school		
Yes	214	86.6
No	33	13.4
Educational level		
None	33	13.4
Non-formal	10	4.0
Primary	38	15.4
Secondary	108	43.7
Tertiary	58	23.5
Ethnicity		
Hausa	88	35.6
Igbo	4	1.6
Yoruba	2	0.8
Others*	153	62.0
Ever given birth		
Yes	152	61.5
No	95	38.5
Wealth index quintile		
Poorest	40	16.2
Second	29	11.7
Middle	46	18.6
Fourth	55	22.3
Richest	77	31.2
Area of residence		
Rural	159	64.4
Urban	88	35.6
Heard of female circumcision		
Yes	224	90.7
No	23	9.3
FGM practice be continued		
Yes	27	11.0
No	188	76.1
Depends	9	3.6
Don’t know	23	9.3
Ever circumcised		
Yes	40	16.2
No	207	83.8

FGM = Female genital mutilation

*Others includes those belonging to the following ethnic groups: Plateau indigenous tribes and other Nigerian ethnic groups.

Table 2: Bivariate analysis on factors associated with FGM among women aged 15-49 years in Plateau State, Nigeria (n =247).

Variables	Circumcised f(%)	Not circumcised f(%)	Total f(%)	χ^2	df	p-value
Age group (years)						
15 – 23	20(26.0)	57(74.0)	77(100.0)	8.712	3	0.033+
24 – 32	8(10.0)	72(90.0)	80(100.0)			
33 – 41	7(11.5)	54(88.5)	61(100.0)			
42 – 49	5(17.2)	24(82.8)	29(100.0)			
Marital/union status						
Currently married/in union	29(18.5)	128(81.5)	157(100.0)	2.482	2	0.289
Formerly in married/in union	0(0.0)	7(100.0)	7(100.0)			
Never married/in union	11(13.3)	72(86.7)	83(100.0)			
Ever attended school						
Yes	27(12.6)	187(87.4)	214(100.0)	15.105	1	?0.001+
No	13(39.4)	20(60.6)	33(100.0)			
Educational level						
None	13(39.4)	20(60.6)	33(100.0)	76.385	4	?0.001+
Non-formal	8(80.0)	2(20.0)	10(100.0)			
Primary	14(36.8)	24(63.2)	38(100.0)			
Secondary	4(3.7)	104(96.3)	108(100.0)			
Tertiary	1(1.7)	57(98.3)	58(100.0)			
Ethnicity						
Hausa	11(12.5)	77(87.5)	88(100.0)	2.603	3	0.457
Igbo	1(25.0)	3(75.0)	4(100.0)			
Yoruba	1(50.0)	1(50.0)	2(100.0)			
Others	27(17.6)	126(82.4)	153(100.0)			
Ever given birth						
Yes	24(15.8)	128(84.2)	152(100.0)	0.048	1	0.827
No	16(16.8)	79(83.2)	95(100.0)			
Wealth index quintile						
Poorest	16(40.0)	24(60.0)	40(100.0)	43.964	4	?0.001+
Second	8(27.6)	21(72.4)	29(100.0)			
Middle	13(28.3)	33(71.7)	46(100.0)			
Fourth	3(5.5)	52(94.5)	55(100.0)			
Richest	0(0.0)	77(100.0)	77(100.0)			
Area of residence						
Rural	38(23.9)	121(76.1)	159(100.0)	19.522	1	?0.001+
Urban	2(2.3)	86(97.7)	88(100.0)			
Heard of FGM						
Yes	40(17.9)	184(82.1)	224(100.0)	#	1	0.032+
No	0(0.0)	23(100.0)	23(100.0)			
FGM practice be continued						
Yes	20(74.1)	7(25.9)	27(100.0)	74.433	3	?0.001+
No	9(4.8)	179(95.2)	188(100.0)			
Depends	3(33.3)	6(66.7)	9(100.0)			
Don't know	8(34.8)	15(65.2)	23(100.0)			

FGM = Female genital mutilation
+ Statistically significant
# Fischer's exact test

As shown in Table 2 above, bivariate analysis using Chi-square test found a statistically significant associationbetween FGM and age group (p = 0.033), school attendance (p ? 0.001), level of education (p ? 0.001), wealth index quintile (p ? 0.001), area of residence (p ? 0.001), awareness of FGM (p = 0.032) and opinion on the continuation of the practice of FGM (p ? 0.001). The following categories of respondents had the highest proportion of circumcised women: 15–23 years age group (26%), never attended school (39.4%), no formal education (80%), poorest wealth quintile (40%), residing in a rural area (23.9%), and those who felt the practise should be continued (74.1%).

Table 2: Bivariate analysis on factors associated with FGM among women aged 15-49 years in Plateau State, Nigeria (n =247).

Variable	AOR (95% CI)	p-value
Age group (years)		
15 – 23	1	
24 – 32	0.26 (0.07 – 1.05)	0.058
33 – 41	0.11 (0.02 – 0.56)	0.008+
42 – 49	0.31 (0.05 – 2.06)	0.226
Educational level		
None	1	
Primary	0.13 (0.01 – 1.64)	0.113
Secondary	0.02 (0.01 – 0.35)	0.006+
Tertiary	0.03 (0.01 – 0.70)	0.030+
Ever attended school		
Yes	1	
No	0.13 (0.01 – 1.62)	0.114
Wealth index		
Lower*	4.51 (0.62 – 32.70)	0.136
Middle	8.63 (1.34 – 55.69)	0.023+
Upper**	1	
Place of residence		
Rural	1	
Urban	1.34 (0.20 – 9.17)	0.767
Heard of FGM		
Yes	1	
No	0.00 (0.00)	0.998
FGM practice be continued		
Yes	1	
No	0.02 (0.01 – 0.10)	?0.001+
Depends	0.08 (0.01 – 0.74)	0.027+
Don't know	0.10 (0.02 – 0.62)	0.013+

FGM = Female genital mutilation, AOR = Adjusted Odds Ratio, CI = Confidence Interval
* Lower combines those in the poorest and second wealth index quintile
** Upper combines those in the fourth and richest wealth index quintile
+ Statistically significant

Results of multivariable logistic regression, as shown in Table 3, indicated that the odds of FGM was 89 % lower among women aged 33-41 years (AOR = 0.11, 95% CI = 0.02-0.56) compared to those aged 15-23 years, also,98% and 97% lower odds of circumcision were found among those with secondary education (AOR = 0.02, 95% CI = 0.01-0.35) and tertiary education (AOR = 0.03, 95% CI = 0.01-0.70) respectively compared to women without any form of education. Additionally, compared to women who did not want the practice of FGM to be discontinued, lower odds of circumcision were found among women who wanted it discontinued (AOR = 0.02, 95% CI = 0.01-0.10), women who were indifferent (AOR = 0.01, 95% CI = 0.02-0.62) and those who responded with "depends" (AOR = 0.08, 95% CI = 0.01-0.74). However, women belonging to the middle wealth quintile had about 9 times increased odds of experiencing FGM compared to those in the richest/fourth wealth quintile (AOR = 8.63, 95% CI = 1.34-55.69).

DISCUSSION

Eliminating all harmful practices on girls and womenis one of the ways the global community seeks to achieve the commitment of ensuring gender equality and empowerment of all girls and women. As outlined in SDG 5,FGM is targeted for elimination worldwide by the year 2030.Nonetheless, nearly one out of every five womenin this study had experienced circumcision,a level that is significantly higherthan the 2017 target of 5% stipulated in the Nigerian National Plan of Action. The prevalence of FGM in this study is substantially higher than the prevalence (3%) reported for Plateau state in the 2018 NDHS, even though the two surveys were conducted at about the same time. Possible explanations for the huge difference may be the variance in the sample sizes used for the calculation of the prevalence; while in the MICS only 247 women responded to the question on circumcision, in the NDHS the respondents were about twice this number (571). Additionally, since harmful traditional practices have generally been reported to be practised more commonly in rural areas, the significant level of FGM found in this study is not unexpected owing to the factmajority of the respondents in this study resided in a rural area.Previous studies conducted in the country in 2014 and 2018 reported nearly similar estimates for FGM in Plateau State and Nigeria respectively.[7]Conversely, some studies conducted in sub-Saharan Africahave found over 50% prevalence for FGM.[10]It is worthy of note that the sample of women that responded to the question on circumcision constitute only 21% (247 out of 1172) of interview entries for Plateau state, therefore the FGM estimate obtained may bea biased estimate owing to the very low response rate and sample size. Nevertheless, there is still room for improvements in addressing FGM in the state if the global and national targets are to be realized.

Similar to previous studies conducted across Africa,[7,10]this study foundage-group, educational level, wealth index, and attitude towards the continuation of FGM to be the predictors of FGM.

Precisely, the odds of FGM decreased in older age groups, with women aged 33-41 years less likely to have experienced circumcision compared to those aged 15-23years. The age group 15-23 years is the youngest in this study and it had the largest number and proportion of women who had undergone FGM, therefore, this group may constitute relatively new cases of FGM and be a reflection of ongoing circumcisions in the state. Also, the women in this age group just exited the age bracket (0-15 years) where FGM is predominantly carried out.[7] Younger women as seen in this study are more at risk of being circumcisedprobably because they are may not be fully independent of parental influence and care, therefore, they are incapable of fully expressing and exercising their rights by refusing harmful traditional practices.Contrariwise, a study conducted in Ethiopia showed theodds of FGM to be higher among older women, which may be a reflection that fewer younger women are being circumcised. Girls and young women especially adolescents need to be protected more by legislation against FGM since they may lack the power and aptitude to strongly resist circumcision.

Furthermore, similar to previous studies,[7]in this study a low wealth index was found to significantly increase the odds of FGM. The women belonging to low wealth statusin this study might have been born and raised in poor households. Poor households are characterised by low parental education especially maternal education, and low levels of maternal education have been reported to increase the likelihood of a daughter becoming circumcised.Moreso, because women of lower

wealth status constitute a group that has less support for the discontinuation of FGM, which is a likely consequence of lesspower and capacity to take strong decisions against the practice, it is plausible to find them at higher odds of experiencing this harmful act.On the contrary,a similar study has found women from wealthy householdsto be more likely of being circumcised. Even so, it is paramount to empower women by alleviating poverty amongst them with the hope that they stand and make decisions independently so as to reject being circumcised.

Women who had attained atleast a secondary level of education were found to have lower odds of FGM compared to their counterparts who had no formal education. This finding is not surprising because the educated women were possibly born and raised in families with strong educational background and such families have a higher tendency to oppose circumcision for girls because of their awareness of the dangers and lack of benefits from the practice. As an illustration, some studies have observed that FGM rates among daughters decreased with increasing level of mother's education.[7] Because most female circumcisions are carried out at an early age, the decision often lies with the parents[8]which is why families with higher educational backgrounds are less likely to circumcise their daughters.Moreso, a close link has been demonstrated between girls and women education and their ability to make choices about their own lives as a result well-educated women can easily refuse harmful traditional practicesbecause they are better informed. In a similar vein, high educational attainment increases the likelihood of a higher wealth status which as illustrated earlier is associated with a lower odds of FGM. Additionally, well-educated womenhavesuperior power and confidence in decision making.There is a need to improve education among girls and womenso that they can become better aware of the dangers of FGMin order to be more confident in jettisoningthe practice.

Women who did not express support or were indifferent towards the continuation of the practice of FGM were less likely to be circumcised compared to those who were affirmative for its continuation.It is plausible to find women who want FGM continued to be more at risk of being circumcised, motivations arising from the alleged socioculturalusefulness and benefits of FGM may be a driving force leading to an increase in its desirability.Some of these perceived social benefits of FGM include reduction in promiscuity to promote decency among women, andinitiation into womanhood which in turn increases acceptance among peers so much so that those who are not circumcised may belabelled or ostracized by their peers and the community.The robust link between FGM and culture and/or religion implies that stakeholders in these spheres of influence need to be purposefully engaged using educational opportunities, with an intent to dispel and correct myths and unsubstantiated assertions about the alleged benefits of the practice.

Despite using state-wide data, social desirability, self-reporting not subject to clinical confirmation, having an enormous number of missing cases in the data-setmight have resulted in a biased estimate of FGM in the state.

CONCLUSION

Despite the dangers associated with FGM,a good number of women in the reproductive age group in Plateau state are circumcised. Additionally, younger age, lack of formal education, low wealth status and wanting the continuation of the practice were identified to be predictors of FGM, therefore, women in these categories should be prioritized forinterventions targeted at eliminating FGM such as education and poverty alleviation.

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HEPATOCELLULAR CANCER SURVEILLANCE IN NIGERIA: THE TIME FOR ACTION IS NOW!

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ABSTRACT:
Hepatocellular cancer(HCC) is the 6th most common cancer in Nigeria and the 4th leading cause of cancer-related mortality in Nigeria**.** Globocan,estimates that the incidence of HCC was over 75,722 cases in Nigeria. Survival from liver cancer has been a dismal 2 months from diagnosis to time and death and the mortality from liver cancer is expected to rise to over 50%from the current numbers over the next 20 years.
Liver cancer surveillance is the defining intervention that can modify the landscape of liver cancer survival in Nigeria and hence concerted effort is required to reverse the trend of poor survival and the incidence to mortality ratio which approaches one.

Introduction
Hepatocellular cancer(HCC) is the 6th most common cancer in Nigeria and the 4th leading cause of cancer-related mortality in Nigeria(1). In 2020, according to Globocan, there were over 75,722 new cases of liver cancer in Nigeria.(2) Mortality from liver cancer is on the rise, with the number of new cases expected to rise over 50% in the next two decades.(3)
Globally survival in HCC patients who present with advanced liver disease is poor. In Nigeria, survival from the time of diagnosis of HCC to death is 2.5 to 3 months and is even shorter in the setting of HIV infection.(4,5) Compared to survival in patients from Egypt who have an average survival of 10-15 months from diagnosis to the time of death.(4)Furthermore patients in the USA and the united kingdom have a 5year survival rate above 70%.(6)The main identifiable reason for such a contrast in survival, is "time of diagnosis" Egypt for instance had over 70% of patients diagnosed at a very late stage compared to less than 7% with late diagnosis in Taiwan.(4,7) Although Hepatocellular cancer (HCC) has very high mortality globally, the introduction and implementation of surveillance have been demonstrated from several other studies to improve detection of tumours at an early stage, receipt of treatment, and the overall survival of this patient.(8–10) Hepatocellular cancer surveillance aims to identify liver cancer at an early stage to implement curative strategies. This paper seeks to demonstrate that implementing structured HCC surveillance will improve the early detection of liver cancer and survival in Nigeria.

Disease surveillance refers to the continuous scrutiny of disease events which enables prompt intervention for disease control.(11) This usually involves systematic collection of data and dissemination of the information obtained from the data for public actions. Liver cancer surveillance consists of the application of six-monthly screenings for liver cancer using a liver ultrasound scan and alpha-fetoprotein (AFP) in all patients at risk of liver cancer. These at-risk individuals include all patients infected with hepatitis B virus (HBV), and all patients who have liver cirrhosis from any other cause. Liver cirrhosis is a premalignant condition that predisposes and serves as a nidus for the initiation and propagation of hepatocellular cancer. The problem of HCC in Nigeria stems from the fact that the country is hyperendemic for hepatitis B which is responsible for over 80% of liver cancer and aflatoxins which contaminates a lot of the staple cereals that are consumed as food.(12)In addition to this, presentation in the early stage of the disease is usually asymptomatic and people who are affected are unwary of the danger looming ahead. Because of the silent nature of the early stages of disease

patients do not seek help until it becomes too late . Time and time again, it has been shown that the implementation of liver cancer surveillance has ensued in the detection of liver cancers at an early stage where they are amenable to curative therapies. A landmark study that has served as the key evidence for the benefit of HCC surveillance was done in Japan, where the implementation of liver cancer surveillance demonstrated improvement in survival from the average four months to about four years over time.(13) This was a dramatic improvement in survival in the era when there were no systemic therapies for liver cancer treatment. With the increasing availability of diverse and effective systemic therapies for the management of people living with advanced liver disease, it is plausible to think that a combination of liver cancer surveillance, locoregional and systemic therapy will lead to longer survival.

The World Health Organisation has adopted the Integrated Disease Surveillance and Response (IDSR), which is a strategy to promote rational use of resources by integrating and streamlining commitment to disease surveillance activities.(11) Nigeria had adopted this strategy since the year 2000 and it can be leveraged upon to implement a surveillance programme for liver cancer.(11) With a population of over 200 million people and a prevalence of hepatitis B at the rate of 13.6% of the population, Nigeria has one of the largest pool of persons at risk of liver cancer in the world.(14)Worthy of note, is the reality that hepatitis B virus infection in Nigeria has unique attributes such as predominant genotype E, very low levels of HBV DNA. (15)Therefore, some of HBV patients are not eligible for treatment based on current guidelines. Consequently, HBV-induced HCC occurs at a much lower age group in those infected with hepatitis B virus.(16)This makes surveillance for HCC in this group of patients a high yield target for early diagnosis and appropriate intervention.

It is not uncommon for a patient with liver cancer to see a physician for the first time when they present with HCC. This happens for so many reasons. Inadequate screening for risk factors is an important element and this may be related in part to prohibitive costs associated with screening tests for HCC such as liver ultrasound and assay for AFP, the two tests which HCC surveillance is hinged on. In our practice, healthcare financing is largely out-of-pocket. It will cost a patient in a public hospital 6,000 to 10,000 naira ($14 - $24) to complete these tests. According to the national bureau for statistics, over 83 million Nigerians live below the country's poverty line.(17) Relative to the average daily income and expendable income of the general population, it is evident, the cost of screening is beyond the reach for a vast majority of patients, especially for an initially asymptomatic suspected disease. In addition, there is a paucity of knowledge among health caregivers about surveillance and its importance in the at-risk population.(18) Furthermore, an absence of a structured screening and surveillance program for liver cancer plays a key role in patients presenting for the first time with terminal liver cancers.

A concerted effort must be put in place if the fight against HCC must be won in Nigeria. Intensive and universal screening for people at risk is a necessity. In the case of Nigeria, all Nigerians are at risk because we live in an endemic area for an important risk factor; hepatitis B. Every Nigerian should have one screening for viral hepatitis in their lifetime and all those who are found to be infected must be linked to appropriate healthcare providers. Screening for risk factors will be a crucial step in establishing a surveillance cohort. Nigeria should borrow a leaf from Egypt where a large-scale population screening is carried out for hepatitis C and efficient linkage to care was carried out(). The feat accomplished by Egypt with a population of 100million and prevalence of hepatitis C that is 14.5% can also be achieved by Nigeria with a population of 200 million and prevalence rate of hepatitis that is 11%.(19) Then a surveillance program should be put in place for all patients infected with HBV in Nigeria when they are linked to care. It is important to point out that hepatitis B is also a notifiable disease in Nigeria and this can serve as one source for establishing a pool of patients that will be included in the liver cancer surveillance program. Primary health care centers can serve as surveillance stations where all at-risk individuals can go to the nearest surveillance station and get their 6 monthly ultrasound scans done and have AFP assay. The AASLD has previously made a recommendation for an

Ultrasound only screening program; this looks attractive to us as a tool that can easily be deployed leveraging on the wide availability of ultrasounds, access and relative ease of scaling up across the nation.(20) Besides screening and surveillance for HCC, linkage to care and availability and accessibility to tertiary treatment centers is another factor that needs consideration in this action plan. The goal of surveillance will be defeated if after early tumour diagnosis, there is either unavailable or unaffordable effective treatment. Therefore, a framework that links patients who are diagnosed to definitive treatment is required to complete the loop of care. If Nigeria considers HCC outcomes as a national emergency , the sourcing for funds to embark on a surveillance and screening program from the world bank or funding agency will be pursued.HCC has been demonstrated from several studies to be cost effective in the long run and will be a wise public health investment.(21) Training centers can be established where community health extension workers under supervision of medical officers can be trained to carry out focused ultrasound scans on the liver to look for liver tumours and point of care devices can be deployed for instant AFP results. The community health workers who work in primary health care centers can be linked to secondary and tertiary health care centers for direct referrals of suspected cases for diagnosis and treatment.Certainly this will only be feasible if there is health insurance coverage and people do not have to worry about how much they have to pay for such services.

In conclusion, despite the huge promise shown by HCC surveillance for detection and management of liver cancers, this strategy is largely not available in mainly developing countries including Nigeria. Identifying the challenges and possible ways to mitigate these as suggested in this commentary will hopefully stimulate conversations and policy shift that will significantly improve detection and surveillance of liver cancer in Nigeria.

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HARMFUL TRADITIONAL EYE PRACTICES IN CHILDREN: A POTENTIAL CAUSE OF CHILDHOOD BLINDNESS- A CASE SERIES SEEN IN NORTH EAST NIGERIA.

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ABSTRACT.

Background

Traditional eye practices are form of eye practices rooted in culture and tradition of people handed down from generation to generation. These traditional healers are members of the community, hence, traditional eye practices are still common with us and are a potential cause of blindness even in children.
Presenting compliant

We present two cases both children under five years of age who were both taken by their parents to traditional healers who carried out procedures on them that resulted into occlusion of the eye in case one with potential cause of amblyopia and reversion of the lid with potential cause of exposure keratopathy in case 2.

Intervention/treatment

Both cases had surgical intervention with the release of the Ankyloblepharon in case 1 and the release of the cicatricial ectropion and full thickness skin grafting in case 2.

Conclusion

Traditional eye practices are still a common practice with us and potential cause of amblyopia and blindness in children increasing their blind years hence the need to intervene and discourage such practices within our communities.

Key words

Traditional, eye practice, blindness.

INTRODUCTION

Traditional eye practices are eye care behaviors and activities rooted in culture and tradition of the people handed down from generation to generation. The term Harmful eye practice is used in describing ocular morbidity from the use of traditional treatment. This is defined as application of substances, or mechanical, or thermal devices to the ocular surface or adnexae by traditional healers or lay people resulting into damage to the globe or ocular adnexae. This include application of cautery to the eyelids, external eye disease as a result of application of harmful traditional medicines.1 Traditional healers are members of the community who may attempt to provide health care using vegetables, animal and mineral substance as well as other acceptable methods in the community.2 In 2020, the use of traditional eye medications(TEM) is still a common practice, as a significant proportion of individual in Africa consult traditional healers before presenting to the hospital.2 This is despite the well documented toxic effects of TEM. Poverty, illiteracy, religious, socio-cultural beliefs,poor health seeking behaviors and lack of access to health facilities have been seen to be predisposing factors to persistence of this practice amongst Nigerians.3, 4 The use of traditional eye medications in children have the potential of causing visual impairment, amblyopia and increasing the blind years for the child, when a child is blind, it affects their social,emotional and psychological set up.5 There is a need for sustained public enlightenment on the effect of harmful traditional eye medication on the

child.

Case 1.

A 7 month old male child of Hausa Fulani parents from Geidam Local Government of Yobe State was brought to the clinic at the Yobe State University Teaching Hospital with a 3 month history of inability to open the left eye, prior to which the child had red eye and discharge. He was then taken to a traditional healer in the community that used some hot knives on the inner aspect of the eye in an attempt to treat the said condition. However, parents noticed subsequently a fleshy growth that got the lids matted together with the child not able to open the left eye. On examination the right eye was essentially normal, however, the child was seen with the left lids joined together by an excess conjunctiva extension from the lower lid to the upper lid - Psuedoankyloblepharon (figure1) The child was then prepared for examination under anesthesia and the growth was noticed to be from the low lid conjunctiva to the upper tarsus with a free space between the growth and the globe. Using an iris repository, (figure2) this growth was then excised and the free end sutured through the inferior fornix and anchored with an improvised bolster using the cut giving set. A normal globe was then visualized, and child did well upon follow up (figure 3)

Post operatively, the child was placed on generous chloramphenicol ointment three times daily for adequate lubrication, syrup Paracetamol 100mg twice daily, syrup Augmentin 250mg twice daily and syrup Vitamin C 5ml tds for 5 days. The bolster was then removed after 14 days.

Case 2.

A 9 month old child from Borno state was brought in by the parents with a 3 months history of everted and contracted upper eyelid following a traditional intervention received on account of swollen left eye that he was taken to the tradition healer who made an incision on the upper lid to reduce the swelling that ended up healing leaving a cicatricial ectropion with keratinizing conjunctiva (figure 4). Child was then prepared and taken to the theater for scar release and application of fenestrated full thickness skin grafting taking from the posterior auricular region and sutured to cover the upper eyelid defect with the application of sofra-tulle and tie over to help with the graft take, which was removed after seven days (figure 5). He was seen to be doing well after the intervention, with daily cleaning of the donor and recipient sites with 5% povidone iodine up to fourteen days after surgery.

DISCUSSION

The use of traditional eye medications is a common practice that could be harmful to the eye leading to blindness. Proper health education of the public and traditional healers can reduce the prevalence of preventable blindness even in children.3 Complications like cornea opacity, staphyloma, corneal ulcers, panophthalmitis, endophthalmitis, uveitis, cataract and bullous kerathopathyetc can occur in patients with the use of TEM.3 Though in this our patients none of the above complications were noted as at the time of intervention. However if these children were allowed to stay a little longer the chances of having amblyopia in the case1 will have been on an increase and also exposure keratopathy and corneal ulceration and blindness in case 2. The timely an appropriate intervention has helped to secure a future of the children with good eye sight. Most traditional practitioners reside in the rural areas and disadvantaged sides of the urban areas, modern facilities are mostly found in the city center where only a few people needing their services are able to pay and most of the tradition healers combine their practice with quasi-religious functions such as devination.6 There is a need to identify these traditional healers in our community and dialogue with them, show them common eye conditions use them as case finders, and the need to promptly refer those patients to access better care.7

CONCLUSION

Use of traditional eye medication in children is harmful and a potential cause of visual impairment and blindness considering the blind years for a child. Identifying traditional healers and encouraging them to refer people with eye condition with an active campaign against TEM will help in reducing avoidable blindness. Establishing good quality, affordable and accessible eye care services within the community will also be of help.

Figure 1

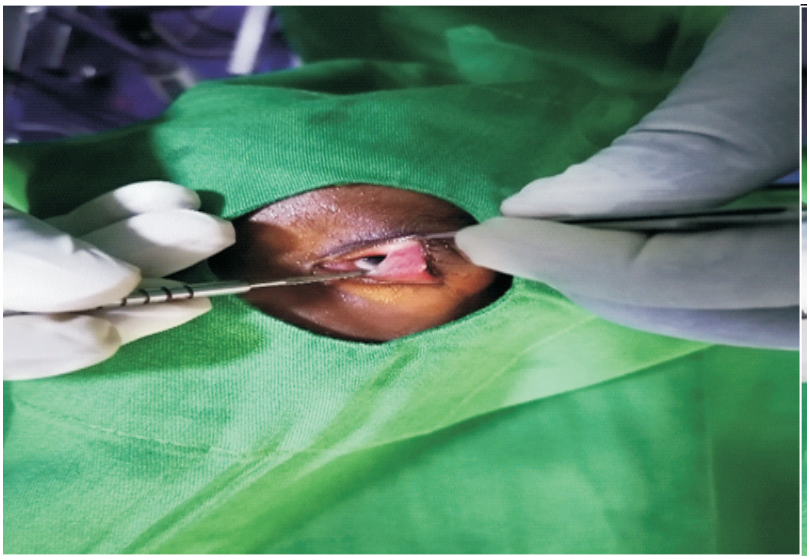

Figure 2

Figure 3.

Figure 4

Figure 5

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HOUSEHOLD FOOD SECURITY AND NUTRITIONAL STATUS AMONG CHILDREN AGED 1-5YEARS IN MAINLAND LGA, LAGOS STATE NIGERIA.

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ABSTRACT

Background: Household food security and malnutrition are common problems that face the Nigerian child. However, inadequate data exists on household food security and nutritional status of the under five children. The purpose of the study is to determine the level of household food security and its correlates, and to determine the nutritional status of children between 1-5years in Mainland Local Government LGA, Lagos State.

Methods: A total of 320 households with 390 children aged 1-5years therein were analyzed. Study area was Mainland Local Government LGA, Lagos State. A descriptive cross-sectional study design using an interviewer administered questionnaire. it contained socio demographic and socio-economic characteristics of the respondents, child feeding practices, food frequency table, food insecurity questions from the HFIAS and anthropometric measurements of the children. Data was analysed using **epi info** (v 3.5.1) statistical software.

Results: only 2.8% of households were food secure. Socio economic factors such as level of education, occupation and household income were found to positively affect household food security. Socio demographic factors such as age, gender, marital status, and household size did not have a statistically significant effect on household food security. The prevalence rates of stunting, underweight and wasting were 45.4%, 8.7% and 1.7% respectively. Most of the children (75.45%) had MUAC values > 13.5cm with 26.45% of them being malnourished. Most of the households had adequate intake of carbohydrates and protein 86.3% and 90.3% respectively.

Conclusion: Very few households were food secure in Mainland Local Government LGA, Lagos State, low socio economic variables shown to worsen the level of food insecurity. High rate of stunting was observed compared to wasting and underweight. An integrated approach will be required to improve the socio-economic status of the households in Mainland LGA, with maternal education and improved household income at the fore.

Keywords:household, food security, nutritional status, under-fives.

Introduction

Household food security is said to exist when a household can secure, either from its own production or through purchases, adequate food for meeting the dietary needs of all members of the household.[1]Household food security is said to be present when members of the household have sufficient, safe, and nutritious food, with food preferences for an active and healthy life.[2] The WHO considers household food and nutritional security as a fundamental human right. Projections from the Food and Agricultural organisation (FAO) show that 1.02billion people i.e., one sixth of the world's population are suffering from hunger. Food and Agricultural organization (FAO) recognizes that healthy, well-nourished people are both the outcome of successful social and economic development and constitute an essential input into the development process.

The FAO reported that almost 870 million people were chronically undernourished in the years 2010-2012. This represents 12.5% of the global population, or 1 in 8 people. Higher rates occur in developing countries, where 852 million people (about 15% of the population) are chronically undernourished.[3] The United Nations (UN) noted that about 2 billion people do not consume a sufficient amount of vitamins and minerals[4] Therefore households who do not meet the criteria as stated in the definition above are said to have food insecurity. The FAO also identified the four pillars of food security as availability, access, utilization, and stability.[5]The millennium development goals were developed by the United Nations (UN) in the year 2000, with the aim of improving the lives of people worldwide. It has 8 goals. The 1st goal:"eradicate extreme hunger and poverty".[6] This tells us the importance of food and its security in the world. The goal has three (3) targets; to reduce by half the proportion of people living below $1.25 per day between 1990 and 2015.[7] Secondly, achieve decent employment for women, men and young people. Lastly, reduce by half the proportion of people who suffer from hunger between 1990 and 2015.[7]The latest FAO estimates in 2014 indicate that global hunger reduction continues: about 805 million people are estimated to be chronically undernourished in 2012–14, down more than 100 million over the last decade, and 209 million lower than in 1990–92. In the same period, the prevalence of undernourishment has fallen from 18.7 to 11.3 percent globally and from 23.4 to 13.5 percent for developing countries. Nigeria has been ranked 86 out of 107countries indexed in the latest Global Food Security Index (GFSI) in 2012. The indexing which cut across three core categories, namely the affordability, availability, quality, and safety.[8] Some 29 percent of households in the poorest wealth quintiles have unacceptable diets (9 percent poor and 20 percent borderline) compared with 15 percent in the wealthiest (2 percent poor and 13 percent borderline). The poorest livelihoods are found in agriculture; Seventy-seven percent of subsistence farmers are found in the two poorest wealth quintiles, as are 70 percent of mixed or cash crop farmers.[9]

Considering the large number of undernourished children who are under five years old, who present at the health facilities in Mainland Local Government Area of Lagos State. There was a need to understudy the quality of nutrition they receive at home; this awakened an interest to go into the community and find out from the mothers and heads of households about their feeding practices and to find out factors that influence their practices.This study assessed the relationship between Household food security and nutritional status of children between 1-5years in Mainland Local Government.

Methods Study Area

Mainland Local Government area (LGA), located in Lagos State, Southwest Nigeria has a land mass of 19.62km^2 and a population of six hundred and twenty-nine thousand, four hundred and sixty-nine (629,469) according to the 2006 National census.[10] The Local Government is made up of 9 wards, designated with letters A-I, i.e. Ward A, Ward B, Ward C, Ward D, Ward E..... Ward I. It has two (2) Area offices at Yaba and Ebute-Metta. Mainland LGA a commercial nerve centre created for all Nigerians from different cultural backgrounds. Originally, farming and fishing were the predominant occupations of the inhabitants but with modernization and industrialization, its people are into commerce and housing, banking, oil and gas, various trades, and artisans.It has four major health facilities which include the Federal Medical Centre, Harvey Road Health centre/ General Hospital and Ebute-Metta Health Centre. It has four Primary Health Care Centres which

service 2-3 of the Wards in the Area.

Study Design

A descriptive cross sectional study design was used.

Study population

This comprised Households with one or more children aged 1-5years in Mainland LGA of Lagos State.

Inclusion criteria:

1. Households with one or more children between 1-5years.
2. Households that have been resident in the area for at least six months.

Sample size determination:

The minimum sample size was calculated using the formula;

$N = \frac{Z^2PQ}{d^2}$ (Cochran's equation)[11]

Where N= minimum sample size

Z=confidence interval at 95%= 1.96

P= proportion taken at 25%=0.25 (proportion of household food security from a study on determinants of Food Security among the Rural Farming Households in Kwara State, Nigeria. By Omotesho O.A: 2006)[12]

Q= complimentary probability = 1-P =1-0.25 =0.75

d= margin of error at 5%=0.05

Therefore;

$n = \frac{(1.96)^2 \times 0.25 \times 0.75}{(0.05)^2} = \frac{0.7203}{0.0025}$ n= 288.12

To make allowance for non-response 10% was added i.e.

288×0.1= 28.8

Minimum sample size calculated is 288+28.8 = 317.

A total of 320 households were used to compensate for non-response.

Sampling

A multistage sampling technique was used to select the sample size for the study.

Stage 1: S**election of Division:**

Two (2) divisions exist; Ebute Metta East and Ebute Metta West. Ebute Metta East was randomly selected.

Stage 2: Selection of streets:

A total of 87 streets were found from the Nigerian Postal service website (NIPOST).[13] The first street was selected by balloting then a systematic sampling technique was used to select a total of 20 streets. This formula was used;

K= N/n

Where: K- the sampling interval

N: is the total number of streets in the Area (sampling frame)

n: proposed/desired number of streets.

K=87/20 = 4.35

Every 4th street on the list was selected until a total of 20 streets were obtained.

Stage 3: Selection of households
On each street a total of 16 Households that met the inclusion criteria were sampled. The first household was randomly selected, and every other house alternately was interviewed until a total of 16 households on each street.

Stage 4: Selection of respondents
In each household the mother or the primary care giver was asked questions from the data collection tool that had been prepared. Where the mothers are the primary caregivers were not at home at the time of data collection, another visit was planned to the time that the mother or primary care giver was available to provide all the information needed for the purpose of this study.

Data collection
An interviewer administered questionnaire was used. It was divided into 4 parts; the first contained socio-demographic information of the respondents, the second part contained questions on household food practices and a food frequency table that was obtained from a previous work in this region, this was used to know the frequency and quality of feeds being given to these children. The third part contained household food security questions based on the HFIAS tool.
The fourth and final part consisted of anthropometric measurements of the children. The height, weight, and mid upper arm circumference (MUAC) were taken. The child's gender and age at last birthday were also obtained. Immunization history was sought. Information on the full immunization status of the children obtained. The basinet weighing scale was used for children who cannot stand and a *harson* bathroom scale was used for the older children. A stadiometer was used for the measurement of height and a recumbent meter was used to measure the length of the younger children. A MUAC tape was used to measure the MUAC.
The younger children who could not stand were measured in recumbent position. Three research assistants with a minimum of senior secondary certificate examination SSCE/GCE were trained and assisted in data collection. The questionnaire was pretested among Household heads who met the inclusion criteria in Folarin Street, Isheri Magodo, Lagos. It is also a suburban setting. Ten questionnaires were pretested and analysed. Corrections were made from the short comings observed in the process. The aim of pretesting was to ensure the appropriateness of the questionnaires.

Data management
Epi info (v. 3.5.1; Centre for Disease Control and prevention, Atlanta GA) statistical software programme was used for data entry and analysis.[13]

***Ethical consideration*:**
Ethical approval was obtained from the Health Research and Ethics Committee of the Lagos University Teaching Hospital. A letter of introduction was obtained from the Department of Community Health and Primary care, University of Lagos. Advocacy visits were made to the Chairman, Mainland Local Government and Women leaders in the community. Written informed consent was obtained from mothers and or primary caregivers of children aged 1-5 years who participated in our study. They were assured of confidentiality during and after the study.

RESULTS
Three hundred and twenty-seven questionnaires were administered to participants in Mainland Local Government area. Three hundred and twenty valid questionnaires were selected from there. This is equal to our calculated sample size with a 10% allowance for non-response. 4 questionnaires were invalid and could not be used for the study. There were no cases of refusal. A response rate of 97.86% was obtained. 320 households were interviewed but a total of 390 children aged 1-5years were found in theses households and were eligible to participate in the study.

Socio-demographic characteristics of respondents
Three hundred and three (94.3%) respondents were females, and 17 (5.3%) were males. The mean age was 31.51±4.94. Two hundred and ninety-nine (93.4%) of the respondents were married while twenty-one (6.6%) were unmarried. Two hundred and twelve (66.2%) were Christians while one hundred and five (32.8%) were Muslims. This study showed that the association between level of education, occupation, household monthly income and number of children under five years in a household withlevel of household food security were statistically significant ($p<0.05$). Age,

gender, marital status, ethnicity, and religion were found not to show any statistically significant association ($p>0.05$) with level of household food security.

Table 1 : Socio-Demographic Characteristics of Respondents

VARIABLE	FREQUENCY (n= 320)	PERCENTAGE
Age		
1-20	3	0.9%
21-30	141	44.1%
31-40	170	53.1%
41-50	5	1.6%
51-60	1	0.3%
Gender		
Female	303	94.7%
Male	17	5.3%
Marital status		
married	299	93.4%
unmarried	21	6.6%
religion		
Christianity	212	66.3%
Islam	105	32.8%
Others	2	0.6%
Traditional	1	0.3%
Ethnicity		
Hausa	5	1.6%
Ibo	95	29.7%
Others	31	9.7%
Yoruba	189	59.1%
Children <5yrs in HH		
1	243	75.9%
2	65	20.3%
3	10	3.1%
4	2	0.6%
Household size		
2-4	193	60.3%
5-6	107	33.4%
7-9	20	6.3%

Table 2 : Socio-economic characteristics of Respondents

VARIABLE	FREQUENCY (n=320)	PERCENTAGE
Education		
Islamic	5	1.6%
post-secondary	105	32.8%
primary	9	2.8%
secondary	169	52.8%
vocational	32	10.0%
occupation		
professionals	23	7.2%
skilled	11	3.4%
Semi-skilled	55	17.2%
unskilled	223	69.7%
Unemployed	8	2.5%
Household Income(naira)		
<5000	46	14.4%
5001- 20000	183	57.2%
20001- 35000	54	16.9%
35001- 50000	15	4.7%
>50000	22	6.9%

A total of 52.8% of respondents have had secondary education, 32.8% had post-secondary education and only 2.8% had primary education. 69.7% of respondents were unskilled, 3.4% were skilled and 7.2% were professionals. Majority (57.2%) of respondents had monthly incomes of 5001-20000 naira only 6.9% earned above 50000 naira.

Table 3 : Frequency of Household food practices

VARIABLE	FREQUENCY	PERCENTAGE
No. of times child fed/day		
2-3 times	121	38.4%
4-6times	192	61.0%
≥7times	2	0.6%
Cook/prepare food at home		
No	5	1.6%
Rarely	2	0.6%
Sometimes	29	9.1%
Yes	284	88.8%
Buy already prepared food		
No	75	23.4%
Rarely	41	12.8%
Sometimes	142	44.4%
Yes	62	19.4%

Majority (90%) of the respondents fed their child/children 2-4 times daily, while 10% fed their children 5-7times daily. A large number (88.9%) of the respondents always prepared food themselves, while 44.4% sometimes buy already prepared food.

Table 4 : Frequency of consumption of different food groups

	ADEQUATE		INADEQUATE	
FOOD GROUP	**FREQ**	**%**	**FREQ**	**%**
CARBOHYDRATE	276	86.3%	44	13.80
PROTEIN	289	90.3%	31	9.7%
SNACKS	147	45.9%	173	54.1%
VITAMINS AND MINERALS	199	62.2%	121	37.8%

Majority (86.3%) of respondents had adequate intake of carbohydrate foods, 90.3% had adequate intake of protein rich foods. Of all the respondents, 62.2% had adequate intake of vitamins and minerals, with 9.7% of respondents having inadequate consumption of protein rich foods.

Table 6 : Frequency of households that experienced food security related conditions within the past 6months

	Never		**Rarely**		**Sometimes**		**Often**	
	freq	%	freq	%	freq	%	freq	%
Worried food would run out	94	29.4%	69	21.6%	128	40.0%	29	9.1%
Unable to feed children nutritious food	43	13.4%	82	25.6%	174	54.4%	21	6.6%
Eat less than usual	70	21.9%	119	37.2%	85	26.6%	46	14.4%
Skip a meal	55	17.2%	78	24.4%	152	47.5%	35	10.9%
Stored food run out and unable to buy more	115	35.9%	57	17.8%	115	35.9%	33	10.3%
Wish you could buy more food	15	4.7%	40	12.5%	132	41.3%	132	41.3%

A hundred and twenty eight respondents (40.0%) were sometimes worried, they would run out of food, while 54.4% were sometimes unable to feed their children nutritious food. A total 14.4% often ate less than usual, with 47.5% sometimes skipping a meal to enable other members of the household eat. A hundred and fifteen households (35.9%) were sometimes unable to buy more food after stored ones have been exhausted.

Table 6 : Frequency of household food security

HHFS score	**Frequency**	**Percent**
secure	9	2.8%
mild	35	10.9%
moderate	117	36.6%
severe	159	49.7%

Only 2.8% of households were food secure, while 49.7% experienced severe food insecurity. A total of 36.6% of households experienced moderate food insecurity with 10.9% experiencing mild food insecurity.

Table 7: Association between number of under 5 children in household and household food security level

	Food Secure		Mild food insecurity		Moderate food insecurity		Severe food insecurity		**Total**
Children <5yrs in household	**freq**	**%**	**freq**	**%**	**freq**	**%**	**freq**	**%**	
1 child	5	(2.1)	21	(8.6)	85	(35.0)	132	(54.3)	**243**
2-4 children	4*	(5.2)	14	(18.2)	32	(41.6)	27	(35.1)	**77**
Total	9	(2.8)	35	(10.9)	117	(36.6)	159	(49.7)	**320**

X^2=11.97, df= 3, *fisher's exact p= 0.006

There is a statistically significant association (p= 0.006) between the number of children <5years and the level of household food security. Households with 2-4 children under 5years had better food security (5.2%) compared to households with one child (2.1%). Severe food insecurity was seen in households with one child under 5years.

Table 8: Association between household size and household food security level

	Food Secure		Mild food insecurity		Moderate food insecurity		Severe food insecurity		**Total**
Household size	**freq**	**%**	**freq**	**%**	**freq**	**%**	**freq**	**%**	
2-4 persons	5	(2.6)	24	(12.4)	63	(32.6)	101	(52.3)	**193**
5-6 persons	3*	(2.8)	11	(10.3)	46	(43.0)	47	(43.9)	**107**
7-9 persons	1*	(5.0)	0*	(0.0)	8	(40.0)	11	(55.0)	**20**
Total	9	(2.8)	35	(10.9)	117	(36.6)	159	(49.7)	**320**

X^2= 6.18, df= 6, *fisher's exact p= 0.403

There is no statistically significant association (p=0.403) between household size and level of household food security. Households with 2-4 members had similar levels of severe food security (52.3%) which can also be seen in households with 7-9 members (55.0%). This means that irrespective of the number of persons in a household, food insecurity is still experienced.

Table 9: Association between level of education and household food security level

	Food Secure		Mild food insecurity		Moderate food insecurity		Severe food insecurity		**Total**
Level of education	**freq**	**%**	**freq**	**%**	**freq**	**%**	**freq**	**%**	
primary	1*	(11.1)	0*	(0.0)	4*	(44.4)	4*	(44.4)	**9**
secondary	2*	(1.2)	10	(5.9)	67	(39.6)	90	(53.3)	**169**
Post secondary	4*	(3.8)	16	(15.2)	33	(31.4)	52	(49.5)	**105**
Islamic	0*	(0.0)	0*	(0.0)	3*	(60.0)	2*	(40.0)	**5**
Vocational	2*	(6.3)	9	(28.1)	10	(31.3)	11	(34.4)	**32**
Total	9	(2.8)	35	(10.9)	117	(36.6)	159	(49.7)	**320**

X^2= 25.93, df= 12, *fisher's exact p= 0.011

There is a statistically significant association (p=0.011) between level of education and household food security. Respondents with primary education were food secure (11.1%) compared to those with secondary education (1.2%) and post secondary education (3.8%). The highest level of severe food insecurity was seen in respondents with secondary education (53.3%) and the lowest among respondents with vocational training (34.4%). This could be due to the daily income earned by the vocation group.

Table 10: Association between income and household food security level

	Food Secure		Mild food insecurity		Moderate food insecurity		Severe food insecurity		**Total**
Average income	**freq**	**%**	**freq**	**%**	**freq**	**%**	**freq**	**%**	
<5000	0*	(0.0)	5	(10.9)	23		18	(39.1)	**46**
5001- 20000	2*	(1.1)	14	(7.7)	62	(33.9)	105	(57.4)	**183**
20001-35000	0*	(0.0)	9	(16.7)	27	(50.0)	18	(33.3)	**54**
35001-50000	0*	(0.0)	3*	(20.0)	4*	(26.7)	8	(53.3)	**15**
>50000	7	(31.8)	4*	(18.2)	1*	(4.5)	10	(45.5)	**22**
Total	9	(2.8)	35	(10.9)	117	(36.6)	159	(49.7)	**320**

X^2= 94.68, df= 12, *fisher's exact p=0.000

There is a statistically significant association (p=0.000) between average household monthly income and level of food security. Households that earned an average income of >50,000 naira had (31.8%) food security as compared to those who earned between 5001-20,000 naira (1.1%). The higher the income, the better the level of food security.

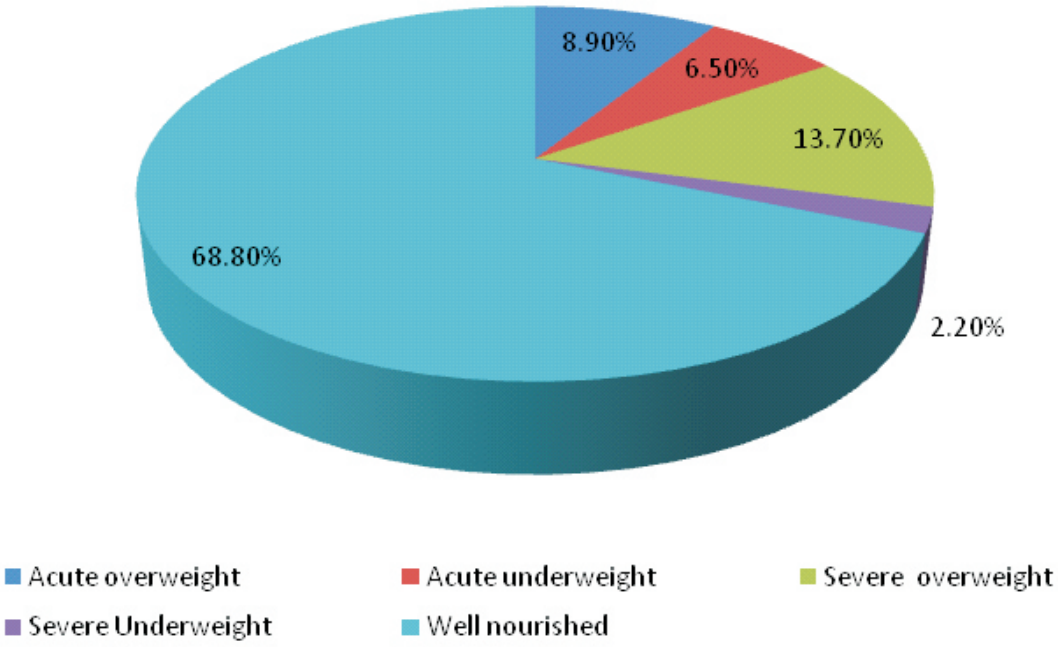

Figure 1 : WAZ distribution for children aged 1-5years in the households

Majority (68.8%) of the children were well nourished, with 13.7% being severely overweight. And 6.5% had acute overweight, while 2.2% had severe underweight.

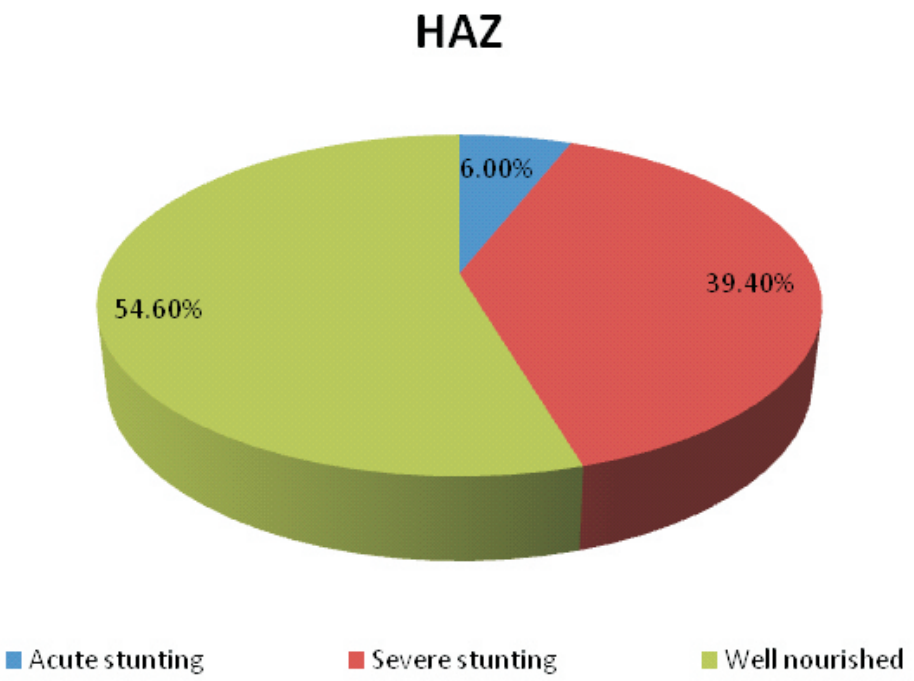

Figure 2 : HAZ distribution for children 1-5years in households in Mainland L.G.A
Majority of the children were well nourished (54.6%) with 39.4% having severe stunting. Only 6.0% have acute stunting.

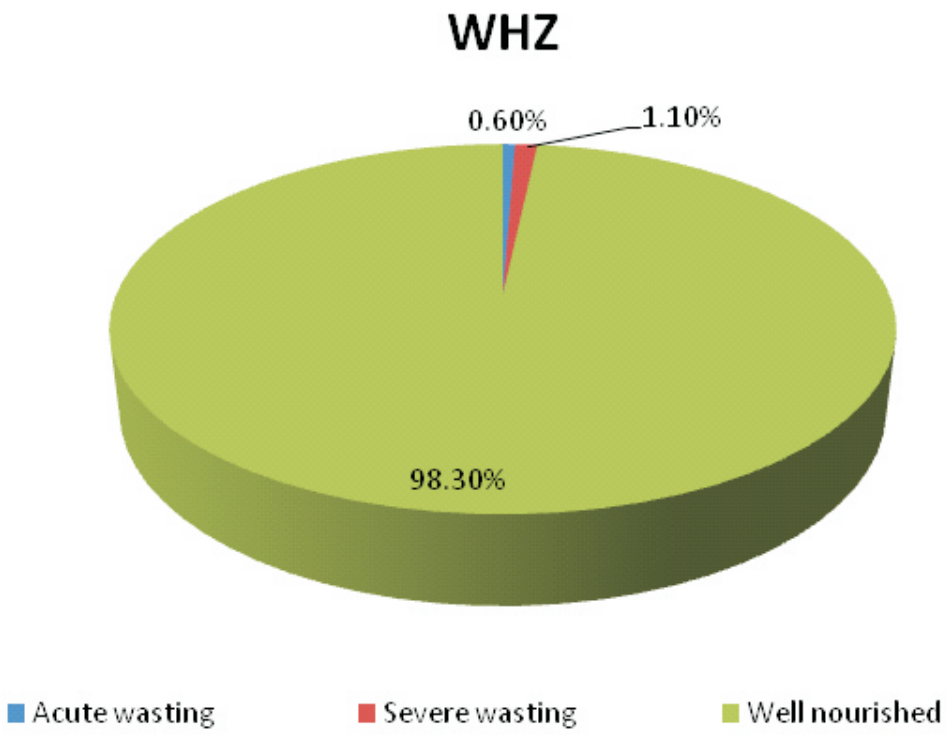

Figure 3 : WHZ for wasting in children aged 1-5years in Mainland L.G.A
Majority (98.3%) of the children were well nourished. A total 1.7% of the children had wasting.

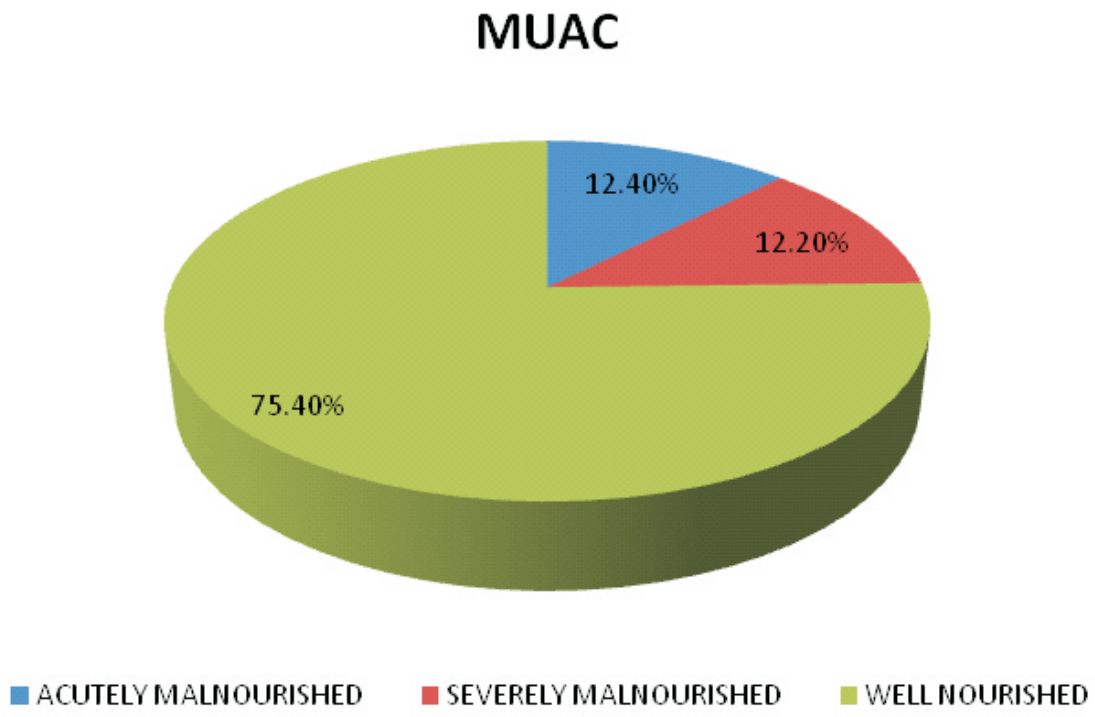

Figure 4: MUAC distribution among children aged 1-5years in Mainland L.G.A
Majority (75.4%) of the children were well nourished based on the measurement of their mid upper arm circumference. A total 12.4% of children were acutely malnourished and another 12.2% were severely malnourished.

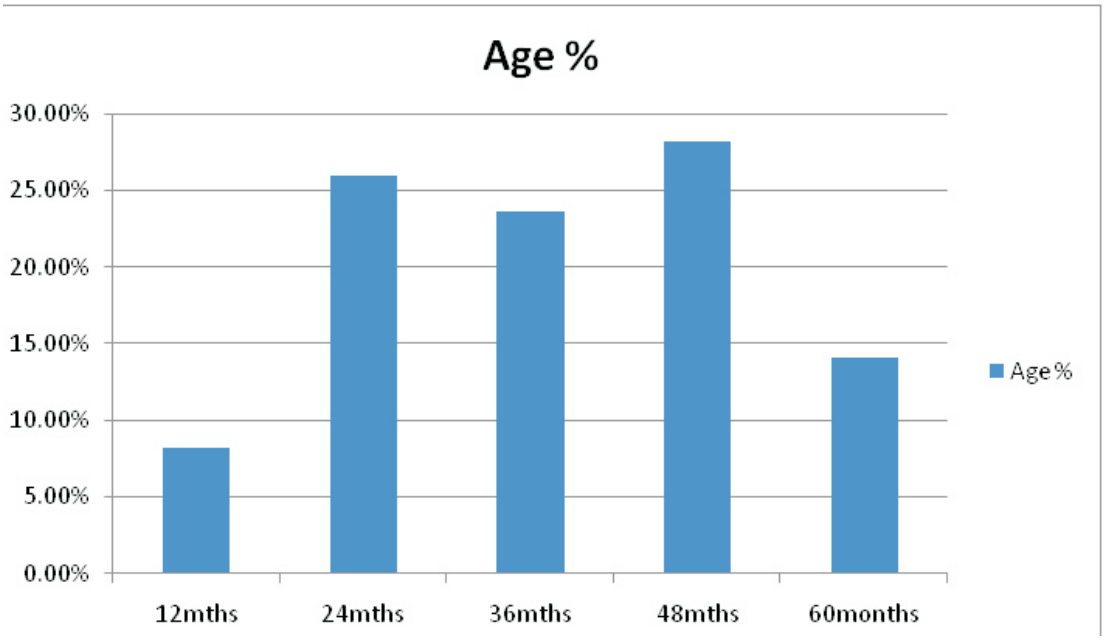

Figure 5 : Frequency of age distribution in children
The highest participants by age group were children aged 48months with a frequency of 28.2% followed by the 24month age group with a frequency of25.9%. the least participants were those of the 12months age group which accounted for only 8.2% of the total number of children that participated in the study.

DISCUSSION

The purpose of this study was to identify the correlates of household food security and the nutritional status among children aged 1-5years in Mainland local Government Area. Most of the respondents interviewed were women (94.7%), this can simply be because women are the primary caregivers of young children. They are concerned with the feeding, health, immunization, and upbringing of the young children. Apart from raising the children, the women are also responsible for preparing meals for the households. More than half (53.1%) of the respondents were within the age group 31-40years and close to ninety five percent (95%) of the respondents were married.

The average household monthly income of more than half (57.2%) of the respondent was between 5001-20000 naira, with up to 70% of them being unskilled. Most households (75.9%) had only a child that is less than 5years within an average household size of 2-4members (60.3%). About sixty percent of households fed their children 4-6times daily, with only 0.6% feeding seven or more times a day. The study revealed that 2.8% of the households were food secure, this figure is lower than what was obtained in a study carried out in Kwara state, where the 25% of the households were food secure.[15] This is not surprising because the households studied in Kwara state were farming households, while the households in this current research were traders, fishermen and artisans with very little or no access to farmland. Such families have to make do with the proceeds of their trade. Another study carried out in Delta state revealed about 31.25% 0f the households were food secure, the study identified income as the single most important determinant of household food security.[16] Majority of households had adequate consumption of carbohydrates (86.3%) and protein (90.3%), with average intake of snacks and vitamins. Carbohydrates and proteins make up the main food groups for energy and the building blocks of the body, and respondents show adequate intake for these groups. This might be responsible for the anthropometric indices observed in the study with majority (98.3%) of the children being well nourished with the weight for height z scores (WHZ) which is used to indicate wasting in children if values fall below normal. This puts at 1.7% the children who are wasted. This figure is lower than those obtained from similar studies. One study done in Akure on anthropometric indices and nutrition among under five children placed the percentage of wasting at 14.8%.[17] The discrepancies in the figures could be due to the fact that the study carried out in Akure was specifically in low-income communities which could indicate the poorer nutritional status. The current study was done in a local government area that can be described as suburban with 7.2% of the respondents being professionals, 3.4% being skilled and 17.2% semi-skilled, the current study population has a mixed picture of occupation which directly reflects their per capita income as against the Akure population that was restricted to low-income earners. Another study done in north-eastern Nigeria, which is similar to the one done in Akure, had 17% of the children wasted.[17,18] This figure is also higher than that obtained in the current study which is 1.7%. Possible explanation for this could be the low level of maternal education. Up to 70% of mothers that were recruited for the study had no form of formal education compared to mothers in this study that 52.8% had secondary education and 32.8% had post-secondary education.

This study obtained a result for height for age measurement with 54.6% of the 390 children recruited for this study as being well nourished. 39.4% were severely stunted and 6.0% as acutely stunted. This places the total stunting at 45.4%. height for age measurement when it occurs below two standard deviations (<2SD) from the normal is considered as stunting this means the child in question is obviously shorter than his age mates. Nutrition plays a vital role in the physical growth of a child. A study done in Akure, southwest Nigeria had a stunting rate of 12.5%.[17] In a comparative study carried out in 3 rural areas, stunting among children under five years in the various communities were as follows: 5.8%, 8.2% and 16.5%.[19] Another study carried out in rural Nigeria among preschool children showed a stunting rate of 21.5%.[20] The above three studies showed stunting rates lower than that obtained from the current study, the discrepancies could be in the study population, where the above studies were all carried out in rural areas and the current study was conducted in a suburban area. A study carried out in northern Nigeria revealed a stunting rate of up to 61% among preschool children.[18] The study had

children from low socio-economic class with maternal education very low or absent. This could be the possible explanation for the high rate of stunting observed in this study. Maternal education when present and high can impact positively to the health and wellbeing of the family. Once a mother is educated, she can take informed decisions about food, balanced diet, immunization, personal and environmental hygiene. This is further strengthened if the woman has socio-economic security, if she earns money, then the above roles will be easily fulfilled. In yet, another study carried out in southwest Nigeria, stunting rate was found to be 33.52%.[17] This study was conducted among low-income earners, majority of mothers of the children were uneducated (80.7%) and earned a paltry monthly income in the range of N1, 500-N5, 900. This could be the reason for the high stunting rate observed.

The mid upper arm circumference (MUAC) is used to measure level of nutrition among children under five years. Values <12.5cm suggests severe malnutrition. Values between 12.5cm-13.5cm suggests moderate malnutrition. Values above 13.5cm are considered well nourished. In other words, values above 13.5cm are normal, anything below that is malnutrition. In this study 75.4% of the children were well nourished with MUAC values above 13.5cm, a total of 24.6% were malnourished with MUAC values below 13.5cm. A study carried out in Akure had MUAC values below 13.5cm in 6.0% of the children. This value is lower than that obtained in the current study but similar in the sense that majority of the children in both study populations were well nourished and had MUAC values above 13.5%. Up to75.4% children in this study and 94.0% in the study carried out in Akure.[17] The mid upper arm is less subject to error compared to weight for height in measuring under nutrition.

CONCLUSION

Based on the findings of this study, it has been concluded that only 2.8% of households in mainland Local Government Area were food secure, with the remaining percentage experiencing varying degrees of food insecurity, ranging from mild, moderate to severe food insecurity. Socio economic factors such as level of education, occupation and household income have a direct relationship to the level of household food security. Socio demographic factors such as age, gender, marital status, and household size did not influence household food security. From the study, 8.7% of the children had growth faltering also known as underweight, a total of 45.4% of the children have stunting and wasting was seen in 1.7% of all the children. Majority of the children have normal z-scores for weight for age (WAZ) at 68.8% and weight for height (WHZ) at 98.3%. Most of the children had normal MUAC value of 75.4% with 24.6% of them being malnourished.

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DISABILITY: A SOCIAL DISADVANTAGE AND ITS IMPACT ON HEALTH OUTCOMES IN NIGERIA

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ABSTRACT
A global and national overview of the burden of disability as a source of social exclusion has been done. It is a diverse and complex entity that has a two-way causal relationship with poverty and negatively affects health outcomes. A wide gap in the knowledge of the health needs of people with disability was uncovered with recommendations made for better inclusion. In conclusion, the need for an intentional approach towards changing the disability narrative in our society is reiterated.

Introduction

The World Health Organization (WHO) defines disability as an interaction between a persons' health condition, his (her) personal and environmental factors.[1] It is a social disadvantage and acts as a barrier to equity in access to quality health care across the globe, and this has an undesirable impact on the health outcomes of people with disability (PWD) and that of their dependents. It is estimated that one billion people live with one form of disability or the other, and this accounts for about 15% of the world's population.[1] With the increasing number of the aging population and chronic diseases, it is expected that the number of PWD in addition to other health needs is on the rise too. Being an extremely diverse group of conditions, PWD have a particular group of health challenges unique to their respective conditions, they also have the same health care needs as everyone else. Their disability may also put them at an increased need for health care need as the general population. The diverse nature of disability is also seen in the fact that some conditions can lead to poor health outcomes and extensive health care needs while others do not. Also, the relationship between poverty and disability as social disadvantages and sources of social exclusion has an untoward combined effect in that either of them independently predisposes to the other and can also coexist leading to unacceptable health outcomes.

The WHO International Classification Functioning, Diseases and Health (ICF) categorized disability into three broad dimensions which are:[2]

1. Impairment – absence or significant difference in a person's body structure and function (including mental) such as loss of vision, memory, or limb and also chronic pain.
2. Activity limitation – related to performing tasks such as seeing, hearing, walking, and cognitive difficulty
3. Participation Restrictions – includes normal activities of daily living such as recreating, daily routine, seeking health care, and preventive services.

The disability may also be related to birth defects (which affect vision, cognition, mobility, hearing, and behaviour), Developmental defects (autism spectrum disorder, attention deficit hyperactivity disorder), Injury related (such as traumatic brain or spinal cord injury), and from chronic and progressive conditions (such as diabetes that may lead to loss of vision, limb or nerve damage).[3] Visual impairment is considered to be the most common form of disability.[4]

Like every other individual, citizens living with disabilities have the rights to access quality and affordable health care. This is the spirit behind the

concept of Universal Health Coverage (UHC). Article 25 of the United Nations Convention on the Rights of People with Disability (CRPD) summarizes the responsibility of the state and the health system to people living with disabilities:[5]

1. Provision of quality affordable health care as provided for the general population, especially as it affects sexual and reproductive health and other health programs.
2. Provision of those services is needed by PWD because early detection, and appropriate intervention, tends to contain the effects, especially among children and the elderly.
3. Make these services available and close to the communities of those in need.
4. Ensure availability of skilled health professionals to render quality and affordable health care for this group as with other members of the society.
5. Ensure equity in access of insurance to all without discrimination based on disability as stipulated by the law of the land.
6. Prohibit any form of discrimination or denial of any kind, be it health care or other essential services, food or fluid on account of disability.
7. This article aims at reviewing disability as a social disadvantage, source of social exclusion, and its impacts on health outcomes in Nigeria and make possible policy recommendations that will benefit people with disability (PWD) in Nigeria.

Discussion

According to the International Labour Organization (ILO), PWD are at constant risk of various discriminations which constitute barriers to participation in different community activities. These may be economic, social, political, cultural, and most disheartening, health inequity. Over half a billion people were then estimated to be living with disability and over 70% of this population are of working age but are more likely to earn less or even be unemployed compared to their non-disabled counterparts. This is even more among women.[6]The disabled are likely to be less skilled or less educated and work in an unprotected informal working environments. The effect of this exclusion from the labour force costs the economy and leads to a gross domestic product (GDP) loss to the tune of 3– 7% of the GDP.[7] As a result, the ILO recommends equal opportunity and mainstream inclusion for people living with a disability. (ILO, 2012)

A qualitative study in Brazil by Olivera et al,[8] suggested that about 20% of PWD are of low socioeconomic status. According to statistics from the American Center for Disease Control, 40% of people 65 years and above have some form of disability and live and live among social disadvantaged American Indian communities.[3] Also, adults with disabilities tend to be obese, smoke, have diabetes, and have heart disease in the proportion of 38.2%, 28.2%, 16.3%, and 11.5% respectively. Furthermore, this report showed that about 30% of adults with disabilities aged 18–44 years do not have a usual health care provider and have an unmet health care need in the past one year due to cost, while 25% of the same population did not have routine health check-up in the last one year.[3]

A 2018 WHO publication reported that the population of Nigerians living with a form of disability or the other stood at about 29 million which represents about 15% of the country's population.[9] Another data from a demographic health survey showed that 7% of household members' 5years or more and 9% of those 60years or greater have some degree of difficulty in a functional domain.[10] This rapid assessment survey also found that PWD lacked access to basic health needs. The prevalence rates were found to be roughly the same among male and female participants. A large population-based study in central Nigeria detailed the socio-demographic profile of PWD and causes of disability among participants living in Niger and Kogi states.[11]About 30% of the population were less than 21yearsold and had no form of occupation, while 16.3% and 13.6% were involved in begging and students respectively. Other types of gainful employment include farming (10.7%), trading (10.7%), civil service (6.5%), full-time housewife (4.6%), skilled artisan (tailors, carpenter, labourers, mechanics, and blacksmiths), and unspecified respectively accounted for 3.5% and 3.3% of the study population.[11] The essence of this detailed breakdown of these occupations was to highlight that majority of PWD are willing and able to

engage in gainful economic ventures as seen in 55% of this population in central Nigeria. With over half of the population gainfully engaged in a sub-optimal setting, when provided with an environment that guarantees full social inclusion, this group of citizens will perform almost at par with the general population and meaningfully contribute to national development and world economy. This collaborates with the ILO publication.[6] Other important social-demographic characteristics of this population were the average monthly income and priority needs. This showed that despite their economic activities, a majority still live in poverty. Though health and rehabilitation ranked low among their priority need, other highly ranked priorities such as food, clothing, accommodation, and education had a direct impact on their health outcomes.

In Nigeria, access to health care remains an issue due to her inability to attain universal health coverage due to a poorly developed health financing system. This naturally excludes PWD due to its various inherent disadvantages. The effect of this is a worsening health outcome among this group of people.

Evidence exists that people with disability are at higher risk of ill health and long term morbidities than the general population.[12,13]

Unique health needs of PWD may be categorized as those as a result of a causal link with the primary disability such as the increased risk of respiratory and urinary tract infections and bedsores in people with spinal injury or stroke. Coexistence of blindness from retinopathy and renal disease in poorly controlled diabetes.[14]

1. Comorbidity – PWD are prone to psychosocial morbidities by 2-3 folds. This predisposes them to poor self-care and adherence. The latter can be either due to the behavioural issue or frank physical inability to comply due to the existing condition. Examples of such include the inability to exercise due to physical mobility restrictions, or forgetfulness from dementia especially in the elderly. As a result, early mortality from manageable conditions like obesity with its attendant respiratory and cardiovascular risk.[15]
2. Those that occur due to non-compliant environments – for PWD, a lot depends on the environmental configuration.[16]The absence of a staircase well adapted to suit their need or road furniture can lead to psychological trauma. Inability to withdraw funds from an automated teller machine by the visually disabled person due to the lack of Braille characters can cause untold emotional trauma especially when it has to do with funds needed to meet a pressing need. Another example is the sense of exclusion felt by a deaf conference participant if the organizers fail to make plans for an interpreter for the hearing impaired.

Some studies suggest that PWD still have unmet needs irrespective of documented gains made in ensuring equity in access to health services. Sanmatrin et al[17] confirmed that despite the obvious improvements, about 50% of persons still fail to receive routine care due to certain unmet access domains such as:

1. Long waiting time due to human resource shortage from non-availability or lopsided distribution.
2. Configuration of stirs, doorways, examination tables, and equipment to suit their needs.
3. Attitude of personnel
4. The dearth of expertise on natural course and special considerations associated with certain disabilities.
5. Insurance-related unmet needs such as dysfunctional social insurance packages, restriction of coverage for certain conditions, and need for co-payments.[18-20] Whereas unmet need has been estimated at 3% in the general populations, it is up to 30–40% in certain groups like children with special needs, people with mental conditions, and the elderly.[18,21-23] These needs and burdens when unmet can have a negative impact on the quality of life in addition to the trauma of adapting to the disability-adjusted life years (DALY) lost.

The online literature search and reviews conducted exposed a huge knowledge gap on issues related to the health care needs of disabled members of Nigerian society. From this, one can extrapolate that disability-related issues in Nigeria appear not to be encouraging. Having a basic knowledge of

the burden of a problem is the first committed step for any reasonable planning and efforts targeted at solving this problem. The unmet need of people in Canada earlier highlighted is a reflection a society that made tangible efforts towards improving the lots of their disabled citizens from the policy end. Though we appear not to have data, it is only expected that the met needs will be infinitesimal compared to unmet.

In Nigeria, efforts aimed at enhancing the level of social protection for people with the recent accent of the Discrimination against People with Disability Prohibition Act, and some entrepreneurial skill training for PWD, the narrative needs to be taken beyond the usual rhetoric. This law is yet to reduce the various forms of exclusion against these special citizens nor has it provided real protection for them.[24]

Going forward, this work will make a few policy recommendations expected to put Nigeria on a better pedestal towards creating a disability-friendly society.

Recommendation/Implications

The United Nations Sustainable Development Goal 10 aims at reducing inequality, improving social inclusiveness while Goal 11 aims at creating a conducive and sustainable environment for PWD. Also, Goals 4 and 8 center on education and empowerment for vulnerable groups.[25]

1. There is an urgent need for those involved in the care of PWD to plan and conduct a widespread situation analysis on the health needs of people with disabilities in Nigeria. This is the only way we can appreciate the enormous amount of work that lies ahead if we are to make any meaningful gain in improving the health outcome of this group of people in our society. This should include a comprehensive profile of PWD, with periodic updates.
2. In these days of interest in Universal Health Coverage, issues of vulnerable members of society should be at the forefront. There should be intense advocacy that PWD will benefit from the non-contributory schemes especially for those who cannot afford to make contributions. This is why profiling is important. Judicious utilization of donor funds and special tax intervention will find a place here.
3. We need to be intentional at promoting disability rights in our society. This should be a purposeful departure from the usual political and conference rhetoric. They should have representations at these pressure groups, and the advocacies should center on involving them in issues that concern them and encouraging them holistically to come out and get involved in decision making.
4. The need for global partnerships cannot be over-emphasized. However, for this to succeed, individual governments do what is required of them by creating a conducive platform upon which some of the partnerships can function. Some degree of local investments need to be on the ground before considering invitations or soliciting help from other nations and donor agencies
5. The orientation and perception of Nigerians need to change on issues of disability. There is a need for more empathy as regards disability. This will go a long way in reducing discrimination and improving protection for PWD.

   Training of health manpower should include making provisions for requisite skills that will meet the needs of our PWD. Health workers need to become interested in certain communication skills such as sign language and a host of others.
6. Nigeria as a member of the United Nations is party to several treaties targeted at achieving disability-related SDGs, and as such should live up to her billing in this area.
7. From the policy aspect, Nigeria needs to ensure proper implementation of provisions of extant laws such as the disability-related aspect of the 2014 National Health Act and Discrimination against People with Disability Prohibition Act 2018.[26,27]
8. In town planning, public places and utilities should be furnished with disability-friendly amenities to enhance the interaction of PWD with the environment and even protect them from avoidable injuries.

9. The role of professional and civil society groups in achieving the above recommendations through purposeful advocacies cannot be over-emphasized, and this will go a long way in alleviating the plight of PWD.

In **conclusion**, this review has reiterated the diverse and common nature of the disability and its negative effect on health-related quality of life of PWDs. Issues of inequity and poor access have complicated the plight of PWD. Also, there is a wide gap in knowledge of the health needs of PWD in Nigeria, and this translates to a high burden of unmet health needs. Finally, all stakeholders should be intentional in their efforts aimed at improving the quality of life of PWD.

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VAGINAL HYSTERECTOMY AND PELVIC FLOOR REPAIR FOR THIRD DEGREE UTEROVAGINAL PROLAPSE COEXISTING WITH UTERINE LEIOMYOMA: A CASE REPORT

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ABSTRACT
Genital prolapse occurs when the ligamentous and muscular supports of the uterus weaken from repeated or difficult vaginalbirths, reduced oestrogen secretion from the ovaries after menopause or a myriad of conditions that increase intrabdominal pressure. It may coexist with uterine fibroids which are common benign tumours of the uterus. Where the fibroids are large enough, the surgeon must make a choice on whether the abdominal or vaginal approach is appropriate for definitive surgical management. We present a case report in which we opted for a vaginal approach to perform a hysterectomy for a symptomatic uterine fibroid in a 45-year-old woman with a completed family size and coexisting pathologies of a third degree uterovaginal prolapse and a rectocele with the aim of highlighting the challenges of managing such a clinical scenario.

Case:
A case of a third degree uterovaginal prolapse and a rectocele coexisting with a symptomatic 16-week leiomyoma in a 45-year-old grand multiparous woman is reported. A vaginal hysterectomy with repair of rectocele and the pelvic floor resulted in a satisfactory outcome.

Keywords:
uterovaginal prolapse, uterine fibroids, vaginal hysterectomy

INTRODUCTION

Uterine fibroids are the commonest benign tumours of the smooth muscle of the uterus among women of reproductive age .They arise as overgrowths of smooth muscle and connective tissue in the uterus and have been estimated to have an incidence of greater than 70% by the age of 50.

They are among the commonest reasons for gynaecological consultationsin Nigerian tertiary health facilities accounting for between 10-20% of gynaecological admissions in Teaching hospitals in Ilorin and Nnewi .

Uterine fibroids are the commonest indication for total abdominal hysterectomy(TAH) at the Jos University Teaching Hospital(JUTH) accounting for 89.5% of indications for TAH.

Fibroids can present as pelvic masses and affect similar demographics of women who can be both in the reproductive age and may have had obstetric risk factors that predispose touterovaginal prolapse. Submucous fibroids are more likely to be associated with genital prolapse when they chronically protrude from the endocervical canal and thus weaken the cardinal and utero-sacral ligaments and present as uterine inversion. Access for vaginal hysterectomy accompanied with or without a myomectomy through the vaginal route with prolapsed submucous fibroids but when intramural or subserous fibroids accompany a genital prolapse, the enlarged uterus might be considered a relative contraindication because of anticipate difficulties in delivering the uterus vaginally with a uterine size of 12 weeks or uterine weight of 250g-300g considered safe to remove vaginally if the uterus is sufficiently mobile.

We report a case of third-degree utero-vaginal prolapse with intramural uterine fibroids in which a total vaginal hysterectomy was performed.

CASE REPORT

Mrs A.F was a 45-year-old Para 5+0 woman who presented with a 3-year history of genital prolapse that was noticed after her last delivery 3 years before presentation. There was no associated menorrhagia,but she had a sense of supra pubic fullness. There was no constipation but no urge or stress incontinence. There were no symptoms of sexual dysfunction. She had no cough. She was diagnosed HIV positive and was on Highly Active Antiretoviral Therapy for 14years and antihypertensives for 3 months A pelvic examination showed that the cervix had prolapsed 3 cm beyond the introitus and there was a rectocele. There was no apical compartment descent.

A bimanual examination showed an enlarged uterus about 14 weeks size. The rest of the clinical examinations were unremarkable.

An abdominopelvic ultrasonography confirmed multiple intramural fibroids with the largest measuring 5.3 by 6cm.

PCV was 35%, Eu Cr was normal, and urinalysis was negative for sugar and protein.

A vaginal hysterectomy, pelvic floor repair and rectocele repair was performed with preservation of the ovaries. The uterus weighed 289g. Her post operative period was uneventful, and she was discharged after 48hours.Her follow up was uneventful.

Informed consent was obtained to photograph the uterine specimen and permission for use of her case for publication was given.

Histological report confirmed uterine fibroids with essentially normal cervix.

Figure 1: Specimen of removed uterus

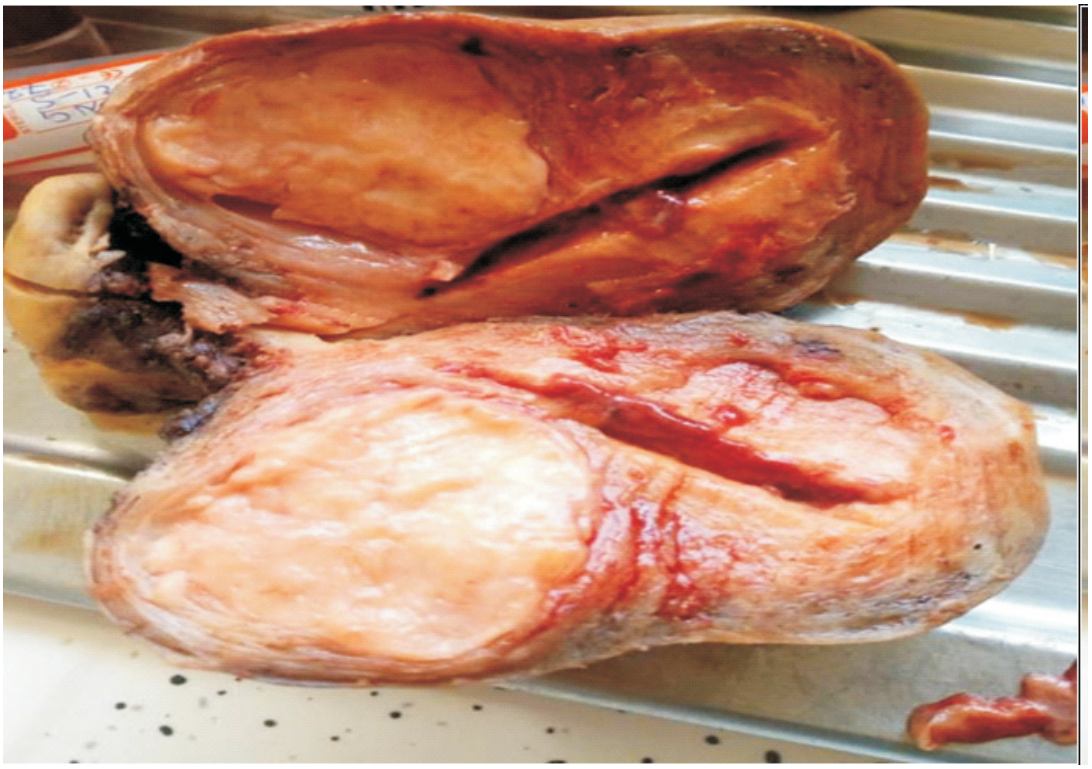

Figure 2: Cut section of uterus showing intramural fibroids

DISCUSSION

Genital prolapse refers to the herniation of pelvic organs to or beyond the vaginal walls. It is a condition that causes symptoms that affect a female's daily activities and sexuality. It has may risk factors but occurs when there is loss of pelvic support for the uterus. It is referred to by many other names such as pelvic organ prolapse (POP),Uterovaginal or vaginal prolapse.The aetiological factors that predisposed this patient to genital prolapse are the grandmaternity with the repeated vaginal births weakening the pelvic floor muscles and the uterosacral-cardinal ligament complex.

It is likely that the prolapse predated the last childbirth that made her notice the genital prolapse but the degree of prolapse worsened after her delivery.

The incidence of genital prolapse in Nigerian women has been variously reported in several studies which are mainly hospital based and differs with the study locations. It accounts for 1.4% of gynaecological admissions in Usman Dan Fodio University Teaching Hospital Sokoto. while in Nnewi it accounted for 1.58% of gynaecological admissions in a year.

Occasionally symptomatic uterine fibroids may coexist with a genital prolapse and require a surgical management strategy that effectively treats both conditions satisfactorily. In the case presented, the patient had intramural uterine fibroids (See figure 2) with a third uterovaginal prolapse as determined by the Pelvic Organ Prolapse Quantification (POPQ).This required delivery of the fibroid uterus via a posterior colpotomy.

There are reported cases where a submucous pedunculated fibroid presents along with a protruding elongated cervix necessitating a vaginal myomectomy or transvaginal morcellation of the fibroid before a vaginal hysterectomy.. Generally, the options of choosing the vaginal route for a hysterectomy for benign uterine conditions are favoured but the exposure of gynaecologists in training to acquire the skills to perform vaginal hysterectomies is decreasing. Reporting over a 3-year period (2002-2005), Ocheke et al found that of the 94 hysterectomies performed for benign gynaecological conditions, only 10% were vaginal hysterectomies and all of these were performed by consultants. Similarly ,in Nnewi ,a 10 year review of 1,370 surgeries found that 224 were hysterectomies and only 47 (21%) were vaginal hysterectomies. While only 1:9 hysterectomies were vaginal in Ibadan where an audit of hysterectomies between 1995-2004 was carried

out.

The advantages of vaginal hysterectomy over the abdominal route include less post operative morbidity and pain, reduced hospital stay and the absence of abdominal scars. However as the uterine sizes increase, the risk for complications for vaginal hysterectomy may occur if the surgeon is not proficient.In well selected cases, comparative studies have shown that a vaginal hysterectomy may be safely performed for indications other than genital prolapse or with coexisting benign conditions such as the presented case.

Comparing operative outcomes between uteri < 12 weeks and > 12 weeks size in 241 consecutive vaginal hysterectomies in patients with benign uterine disease, Sahin found no significant intra or post operative complications or conversion to laparotomy.

The take home lessons from the presented case are that careful case selection, good training and surgical technique allow the removal of enlarged fibroid uteri in patients with a coexisting genital prolapse.

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