THREE-YEAR REVIEW OF CHILDHOOD AND ADOLESCENT PRESENTATION IN THE GYNAECOLOGICAL EMERGENCY UNIT OF THE JOS UNIVERSITY TEACHING HOSPITAL.

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ABSTRACT

Background:Gynaecological problems in children and adolescents are often both medically and psychologically unique and require a highly skilled approach differing from those utilized from an adult female population. Gynaecological problems in childhood and adolescence constitute great levels of anxiety in parents. Most presentations are related to unprotected sexual intercourse and its complications. The aim of this study is to determine the prevalence and pattern of gynaecological problems in childhood and adolescence population in gynaecological emergency of JUTH.

Methods:This was a 3-year retrospective study of the records of childhood and adolescent presentation at gynaecological emergency of JUTH between 1st January 2018 and 31st December 2020. A proforma was used to extract information from the file records of all patients aged 1 month to 19 years seen at the gynaecological emergency of JUTH. Information on age and gynaecological condition diagnosis was extracted. Data was analysed using IBM SPSS statistics version 23.0.

Result:The hospital attended to 5025 emergency gynaecological cases over the 3-year period. Children and adolescents made up 133(2.6%) cases, of which (9.8%) were children and (90.2%) were adolescents. The commonest presentations were abortion (24.8%), of which induced abortion is the commonest (64%) form of abortion, and menstrual disorders (21.8%).

Conclusion:Childhood and adolescent gynaecological disorders constitute a significant number of emergency gynaecological presentations. There is a need for gynaecologists to acquaint themselves with the pattern of presentation of these disorders and promote the health of teenagers as this group is often misinformed. Additional attention is needed to safeguard their reproductive health.

Keywords*:* childhood, adolescent, gynaecological emergency, Jos.

Introduction

Childhood is the age span ranging from birth to puberty.[1] Adolescence is described as that transitional period of life when a carefree child becomes a responsible adult.[2]The adolescent period represents a time of considerable change in a woman's lifetime as reproductive capacity and sexual activity commence.[3] There is no statutory legal age limit at which adolescence begins and ends; however, WHO defines adolescents as young people between the ages of 10 to 19 years.[4]

In the emergency department, gynaecologic complaints are common presentations for adolescent girls, who may present with abdominal pain, pelvic pain, vaginal discharges and vaginal bleeding.[5] The different presentations in this period are broad and further complicated by psychosocial factors, confidentiality concerns and the need to recognize abuse and sexual assault.[5]

During adolescence, young people go through many changes as they move from childhood into physical maturity.[6] It is the time during which secondary sexual characteristics develop, menstruation begins and the psychological outlook of the girl changes as she develops a more adult aspect of herself.[6] The following changes may commence during puberty and mature to their full potential during the adolescent period: breast development, pubic hair growth, axillary hair growth, growth spurt and menarche.[6] The relative hypothalamo-pituitary-ovarian axis immaturity in the immediate post-menarcheal period results in defective regulations which causes irregular changes and sequences in menstrual characteristics.[3]

Generally, social factors such as poverty, ignorance, malnutrition, neglect and lack of social support, bizarre cultural and religious beliefs, and loss of moral values have increased the incidence of some gynaecological disorders.[3] Also, during this period, a lot of sexual debuts occur coupled with difficulty or safer sex negotiation with older males.[3] As a result, the adolescent female is faced with high a risk of sexually transmitted diseases, Human Immunodeficiency Virus (HIV), unwanted pregnancies and their complications. [3]Other gynaecological disorders of childhood include vulvovaginitis, labial adhesions, precocious puberty, urethral prolapse, ambiguous genitalia, ovarian tumour, and sexual assault.[6-8] The gynaecological disorders seen among adolescents include menstrual disorders (amenorrhoea, irregular menstruation, dysmenorrhoea, oligomenorrhoea premenstrual syndrome etc), pelvic inflammatory disease, ovarian tumours, hyperprolactinemia, hirsutism, imperforate hymen, Gartner's duct cyst , urethral prolapse, vesicovaginal fistula, Bartholin's cyst/abscess, sexual assault and sometimes infertility.[2,3,6,8]

Gynaecological problems in children and adolescents constitute a significant number of gynaecological presentations.[6,8] The purpose of this study is to acquaint clinicians with the pattern of gynaecological disorders in this patient population. There is a need for increased awareness of the pattern of presentation of childhood and adolescent gynaecological disorders as they have an enormous impact on their future reproductive health and general wellbeing. There is therefore, a need to evaluate the pattern of presentation of childhood and adolescent gynaecological disorders in our centre. Also, to see if the nature of gynaecological presentations in JUTH differ from that elsewhere considering the socio-cultural and economic differences.

This study, therefore, assessed the prevalence and pattern of gynaecological problems in childhood and adolescent populations in gynaecological emergency of Jos University Teaching Hospital (JUTH).

Methodology

Study design*:* This was a retrospective study of cases of emergency gynaecological care offered to children and adolescents at the gynaecological emergency of JUTH, Jos, Plateau State, North Central, Nigeria, over a three-year period (January 2018-December 2020).

Study area/study setting*:* The study was conducted in the Jos University Teaching Hospital (JUTH) 600-bed tertiary health institution located in Jos, the capital of Plateau State in North central Nigeria. Plateau State is one of the 36 states in Nigeria. It has over 30 ethnic groups.

As at 2016, Plateau State population was 4,390,337. The capital, Jos is famous for its cold climate that has been attributed to its high altitude which is 1238 meters or 4062 feet above sea level.

The teaching hospital was established in 1981; it is located in the eastern part of Jos metropolis and has a well-established department of Obstetrics and Gynaecology, with eighteen consultants spread across the subspecialties. The department boasts of a very functional maternity unit, among other specialist service points, which offers obstetrics and gynaecological services to patients from Plateau state and its neighbouring states of Bauchi, Taraba, Nasarawa, parts of Kaduna and Gombe among others. It serves both as a secondary and a tertiary centre because of its peculiar location and costs being affordable to both the rich and poor.

The study includes all patients aged 1 month and 19 years seen at the gynaecological emergency of JUTH from 1st January 2018 to 31st December 2020.

Data collection and analysis: A proforma was used to extract information from the file records of all patients aged 1 month to 19 years seen at the gynaecological emergency of JUTH between 1st January 2018 and 31st December 2020. Information on age and gynaecological conditions diagnosis was extracted. Data was analyzed with IBM SPSS statistics version 23.0. Descriptive statistics were presented in frequency, proportions and charts.

Ethical approval: Ethical approval for this study was obtained from the ethical committee of JUTH with approval reference number: JUTH/DCS/IREC/127/XXXI/2433.

Result

Prevalence of Gynaecological Disorders

Out of a total of five thousand and twenty -five (5,025) gynaecological emergency cases managed in JUTH over the study period, hundred and thirty-three (133) were children and adolescents, contributing 2.6% of all gynaecological emergency cases.

Table 1 (below) shows that more than half of presentations at emergencies were among adolescents between 18- and 19-year-olds. Followed by those between 16- and 17-year-olds accounting for about a fifth of total presentations.

Table 1: Age distribution of patients with Gynaecological Disorder (n=133)

Age group in years	Frequency	Percentage
1-5	11	8.3
6-9	2	1.5
10-11	1	0.8
12-13	6	4.5
14-15	9	6.8
16-17	27	20.3
18-19	77	57.9

Figure 1 below shows that of the 133 childhood and adolescent cases, 13(9.8%) were childhood emergencies and 120(90.2%) were adolescent emergencies.

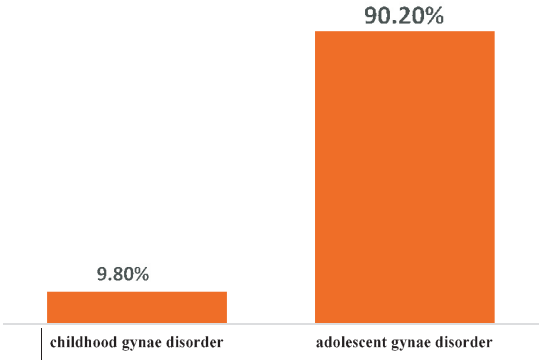

Figure 1: Distribution of adolescent and childhood gynae presentation at emergency

Table 2: Pattern of Gynaecological disorder among childhood

Childhood Gynaecological Disorders	Frequency	Percentage
Rape	5	38.5
Vaginal Atresia	2	15.4
Vulval Trauma	4	30.8
Vulvovaginitis	2	15.4
Total	13	100

Table 2 (above) shows that of a total of 13 childhood presentations, rape (38.3%) and vulva trauma (30.8%) were the commonest presentations at the gynaecology emergency room at Jos University Teaching Hospital.

Table 3: Pattern of Gynaecology disorder among adolescent

Adolescent Gynaecological Disorders	Frequency	Percentage
Abortion	33	27.5
Bartholin cyst	3	2.5
Ectopic pregnancy	1	0.8
Endometriosis	1	0.8
Menstrual disorder	29	24.2
Ovarian tumour	15	12.5
PCOS	4	3.3
PID	7	5.8
Rape	12	10
Uterine fibroid	4	3.3
VVF	11	9.3
Total	120	100.0

Table 3 above shows that of the 120 adolescent presentations, abortion (27.5%) and menstrual disorders (24.2%) were the commonest presentations at the gynae emergency. Induced abortion constituted the major (64%) type of abortion seen in adolescent in this study (***Figure 2***)

Table 4: Pattern of Gynaecological disorder in childhood and adolescent

Gynaecological Disorders	Frequency	Percentage
Rape	5	3.8
Vaginal Atresia	2	1.5
Vulval Trauma	4	3.0
Vulvovaginitis	2	1.5
Abortion	33	24.8
Bartholin cyst	3	2.3
Ectopic pregnancy	1	0.8
Endometriosis	1	0.8
Menstrual disorder	29	21.8
Ovarian tumour	15	11.3
PCOS	4	3.0
PID	7	5.3
Rape	12	9.0
Uterine fibroid	4	3.0
VVF	11	8.3
Total	133	100.0

Table 4 above shows that commonest childhood and adolescent gynaecological disorders presentations at gynaecological emergency were abortion (24.8%), menstrual disorder (21.8%) and ovarian tumour (11.3%).

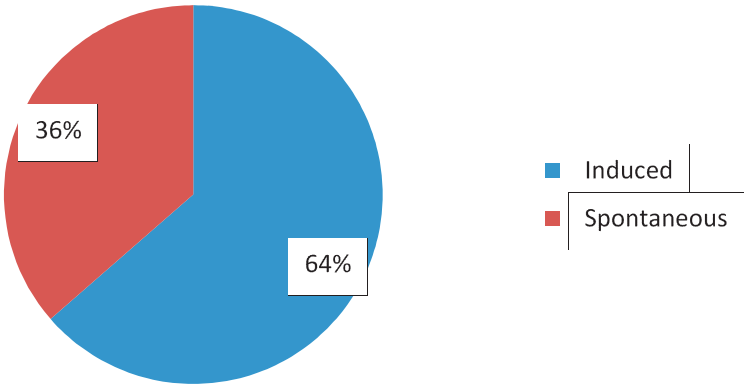

Figure 2: the distribution of the types of abortion of childhood and adolescent gynaecological presentations

Discussion

In the period under review, children and adolescents constituted 0.3% and 2.4% of all gynaecological emergencies seen respectively. The adolescent presentation is lower than the findings of Anikwe et al in Federal Teaching Hospital Abakaliki who reported that adolescent constituted 5.1% of the gynaecological presentation.[9] These is due to the difference in time and duration of the studies.

Most of the adolescents presenting at gynae emereency were in the age range of 18-19 years. This was similar to the findings of a previous study.[9,10] Abortion (24.8%) was observed as the commonest adolescent presentation in gynaecological emergency of JUTH. This was similar to the study of Ekwempu et al at Jos,[11] but was unlike the findings of Anikwe et al at Federal Teaching Hospital, Abakaliki who reported the commonest presentation as menstrual disorders.[9] This is likely due to early marriages practised in this

region and religious belief. The abortions were mostly induced (63.6%).[12] The reason for high rates of abortions could be because adolescents often experiment with sex, although they are usually inexperienced in bargaining with their partners regarding the use of contraception, this could lead to unwanted pregnancies leading to unsafe abortions.[10] WHO estimates that 2.5 million adolescents have unsafe abortion annually.[12]Abortion is a neglected problem in health care in developing countries, and yet decreasing safe abortion practices dominate those settings.[13,14] Adolescents who have unintended pregnancies may resort to unsafe abortion practices due to socioeconomic factors, cultural implications of being pregnant before marriage and restrictive abortion laws[3,15]Adolescents clandestinely use self-prescribed drugs or beverages, insert sharps in the genitals, and most often consult traditional service providers or quacks in an attempt to abort a pregnancy.[13,16] Abortion could result in morbidities such as sepsis, severe anaemia, and, in some instances, infertility and death.[13,17,18]

Menstrual disorder was next in frequency (21.8%), this is because of the irregularities that follow menarche. This was lower than the findings of Irem et al(36.8%) at Ebonyi State University Teaching Hospital.[3] Menstrual disorders are very common in adolescence, and can be the cause of a significant amount of stress to both the patients and their parents.[6,19] Amenorrhea(either primary or secondary), abnormal uterine bleeding and dysmenorrhea are conditions that require careful evaluation through a stepwise and logical manner.[19] The occurrence of irregular, prolonged or heavy uterine bleeding is one of the most urgent gynaecological problems in adolescence.[6,19] Dysmenorrhea refers to painful menstruation and is the most common reason for which a young girl may refer to a gynaecologist.[19] It is characterized as primary in the absence of an underlying organic disease and as secondary when there is evidence of pelvic pathology.[19] Appropriate and early management of the patients is necessary to minimize the possibility of future complications such as infertility regarding women's reproductive ability.[19,20,21]

Just above 10% of adolescent presentations were due to Ovarian tumours. This was similar to the findings of Anikwe et al (11.5%) at Federal Teaching Hospital, Abakaliki.[9] This similarity may be due to the pattern of occurrence of ovarian tumours. Prompt and precise detection of either benign or malignant tumours in childhood and adolescence may lead to cure and preservation of fertility.[14]

Rape constituted 9% of adolescent presentations and 3.8% in children, and this was the commonest childhood presentation. Rape constituted 12% of childhood gynaecological presentation in Zaria.[16] The perpetrators of these rapes are usually from the victim's neighbourhood or boyfriends. This is similar to the study done in Zaria.[16] This may be due to vulnerability of children and adolescent to these group of people. Some consequences of rape could be physical injuries, unwanted pregnancy, depression, lower self-esteem, sexually transmitted infections and criminal abortion amongst adolescents.[17,18]

Vesicovaginal fistula (VVF) constituted 8.3% of the adolescent presentation. VVF is widespread in sub-Saharan Africa and South Asian countries, where cultural factors increase the incidence of child marriage, Marriage at a young age, shortly after the girls first menstrual period between the ages of 9 to 15.[22,23] In many of these cases the first pregnancy is followed soon after marriage.[23]these women who marry early are often from lower socio-economic class and are more likely to be malnourished which further worsens their pelvic dimensions with resultant risk of CPD and VVF.[2] Women affected by fistula are often abandoned by their relatives, stigmatized by the community, physically debilitated and even blamed for their condition.[23] Social isolation and abandonment often lead to low self-esteem, depression and prolonged emotional trauma.[22,23]

Pelvic inflammatory disease (PID) constituted 5.3% of adolescence presentation. This is different from the finding at Abakaliki which constituted 10.3% of adolescent gynaecological presentation.[20] This may be due to the high patient population in Abakakiliki. PID occurs mostly in the reproductive age group when sexual activities are highest.[8,20] Most sexually-active adolescents engage in unprotected sex leading to sexually transmitted disease and PID.[20] Poorly treated or untreated PID may lead to infertility,

ectopic pregnancy and chronic pelvic pain, thus having a negative impact on their future reproductive health.[8,20]

Uterine fibroid constituted 3% of the presentation in adolescence. Uterine fibroid is the most common gynaecological tumour in the reproductive years in Africa.[6,24] However it is extremely rare in adolescence (1%), with few reports found in a systematic review performed at PubMed/MEDLINE and EMBASE.[24] Optimal treatment in this age group is not defined, but myomectomy has advantages and disadvantage.[24]

Conclusion

Many health and social challenges confront young people all over the world. From this study, induced abortion in adolescent and rape cases in children were prominent. Teenage problems need to be dealt with sensitivity. Counselling should be an integral component of treatment strategies, awareness and utilization of youth-friendly services must be provided. Gynaecologist must create awareness about the negative health consequences of unsafe abortion and prevent unwanted pregnancies in teenagers by advocating for safe sex practices, STIs and emergency contraception should be included in sex education.

Preventive measures such as medical, traditional and religious advocacy to curtail indiscriminate and risky sexual behaviour, health education on adolescent reproductive health, use of contraception, use of potent antibiotics, and other post abortal care services will go a long way in reducing the reproductive and general health problems of children and adolescents.

Government must make legislations that will curtail perpetrators of rape and ensure that no culprit goes unpunished to serve as a deterrent to others. Victims must be encouraged to report all cases of rape, and social media campaigns that will encourage victims to speak up should be advocated. Legislation must also be made against teenage marriage as this leads to many reproductive health challenges.

Conflict of Interest:

There is no conflict of interest.

Funding:

No external funding was obtained for this study

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