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A 5-Year Review of Adolescent Gynecological Emergencies in a Tertiary Hospital in Nigeria

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***Abstract*—BACKGROUND- Over the last decade, increased advocacy has been drawn towards the need for focused attention on women's health as an index of a nation's development. Adolescent gynecology is a unique subspecialty that encompasses the reproductive health care of girls and young women under the age of 20years. With the increasing economic downturn, easy access to the internet and social media, the adolescents are more vulnerable to life style changes that expose them to reproductive health challenges. Periodic review of cases managed in any health facility gives an insight on the way forward in confronting encountered challenges.**

OBJECTIVES- To highlight the trends of gynecological emergency cases presented at this facility in the background of exploits by the adolescents in recent times.

METHODOLOGY- This was a retrospective study carried out in the department of Obstetrics and Gynecology of the University of Calabar Teaching Hospital, Cross River State, South-South Nigeria. The case folders of patients were retrieved from the records unit of the department. Information onage, level of education, marital status, occupation, contraceptive use, sexual relationshipsand presenting complaints were collected, collated, inputted and analyzed using Epi-info version 7 and presented in tables as frequencies and percentages.

RESULTS- The hospital attended to over 4,849 gynecological cases over the 5year period. Adolescents made up 2,584 (53.3%) cases, of which 2052 (79.4%) were emergencies. The common presentations were incomplete abortion/miscarriage 880(42.9%), pelvic inflammatory disease 630 (30.7%), ectopic pregnancy 268(13.1%), abnormal vaginal bleeding/abnormal menses 193(9.4%), and sexual assault 81(3.9%).

CONCLUSION- Adolescents encounter lots of challenges with issues of reproductive health,which may have a huge impact on their future fertility. As this group is often either uninformed or misinformed, additional attention is needed the safeguard their reproductive health.

***Index Terms* — Adolescent, gynecological emergencies, Calabar.**

I. INTRODUCTION

Reproductive Health is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity, in all matters related to the reproductive system and to its functions and processes [1]. The concept is centered on the vision for every individual to live an acceptable quality of life that positively contributes to national development. Therefore, essential reproductive health care should be integrated and accessible to every Nigerian, both in rural and urban areas. The involvement of the communities and recognition of their socio-cultural environment and values must be ensured. Various terms are used to categorize young people; "adolescents" refers to 10–19 year olds(divided into early [10–15 years] and late[16–19 years] adolescence);and "young people" refers to 10–24 year olds. In the world today, approximately half of the population is under 25, with 1.8 billion people aged between 10 and 24 years—90% of whom live in low- and middle-income countries (LMICs) and many experiencing poverty and unemployment[2],[3]. While sexual initiation and sexual activity among adolescents vary widely by region, country, and sex [4], adolescents often engage in sexual activity at a younger age, and marrylate [5, 6]. Consequently they are sexually mature longer before marriage than has historically been the case. In some societies, cultures, and religion, child marriage is still in practice with rising incidences of obstetric fistulas [7].

There are multiple problems faced by adolescents such as early marriage, early onset of sexual intercourse with consequent high rate of STI/HIV/AIDS, induced abortion, ectopic pregnancy and obstetric fistulae. The department of health statistics reports data that shows the age at sexual debut in Nigeria is roughly 15years among adolescents (DHS 2003, 2008, 2013)[8]. In addition, growthimpairment and malnutrition with its main effects manifesting at this age coupled with lack of knowledge and access to relevant reproductive health information and services makes it necessary to focus on this age group [7, 8]. Pregnancies among unmarried adolescent mothers are more likely to be unintended and end in induced abortion; coerced sex (reported by 10% of girls who first had sex before age 15) contributes to unwanted adolescent pregnancies, among a plethora of other negative consequences [9].

Officially, the minimum age of marriage has been set at 18 years in Nigeria though it is extremely difficult to enforce in Muslim communities where there is no age limit for marriage [10]. In several states, legislation against Female Genital Cutting and other harmful practices has been passed into law though enforcement is uncertain[10]. Adolescents face a higher risk of complications and death as a result of pregnancy than older women. For example, in Latin America, the risk of maternal death is four times higher in adolescents under 16 years old than women in their twenties[11].

Anadolescent's sexual and reproductive health is strongly linked to her peculiar social, cultural, and economic

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environment [12]. In addition to regional variation, experiences are diversified by age, sex, marital status, schooling, residence, migration, sexual orientation, and socioeconomic status, among other characteristics [13]. In terms of complications, anemia, malaria, HIV and other STIs, postpartum hemorrhage, and mental disorders, such as depression, are associated with adolescent pregnancy [9], [10]. Approximately 40% of abortionsare performed under unsafe conditions with its' attendant complications. In Nigeria, adolescents account for up to 74% of all induced abortions and approximately 60% of all gynecological hospital admissions [13]. Regional differences exist; for example, 15–19 year olds account for25% of all unsafe abortions in Africa, but the proportion in Asia and Latin America and the Caribbeanismuchlower[14].A series of multifaceted barriers currently prohibits good sexual and reproductive health for adolescents. At the political level, adolescent sexual and reproductive health (ASRH) is low priority and there are often restrictive laws and policies in place [15]. Various societal, cultural, and religious factors create an inhibitive environment for discussion of ASRH as many societies hold a deeply embedded sense of disapproval of adolescent sexual activity; this is often demonstrated through the stigmatization of sexual health concerns, in particular STIs/HIV[15],[16]. Judgmental attitudes about sexual activity abound, especially for those out of marriage and sexually active girls and women. In some regions, accepted practices of early marriage and childbearing, age differences between partners, and societal pressure prohibiting use of contraceptive methods may also exist. Healthcare workers should be equipped to provide accurate, balanced sex education, including information about contraception and condoms so that young people have the means to protect themselves, provided within a context of healthy sexuality, without stigma or judgment. Adolescents face most challenges because topics relating to sex are hardly discussed at home and school and majority of the religious groups view sex before marriage as immoral. The schools, including tertiary institutions do not include reproductive health or sex education in their curricular; hence the adolescent is most often left with the option of self-venture with internet pornography and peer groups as veritable tools/guides. The result of her experimentation is what she presents to the hospital as gynecological emergencies in most cases.

II. METHODOLOGY

This was a retrospective study of cases of emergency gynecological care offered to adolescents at the department of obstetrics and gynecology, University of Calabar Teaching Hospital, Calabar, South-South Nigeria, over a 5-year period from January 1st 2012 to December 31st, 2016. Cases of vaginal candidiasis, vulva itching, dysmenorrhea, dyspareunia, uterine fibroids, endometriosis and other non-life threatening conditions were excluded from this study so as to remove biases.

A total of four thousand, eight hundred and forty nine (4,849) gynecological caseswere attended to in this hospital over the period. Of this number, two thousand five hundred and eighty four (2,584) were adolescent gynecological cases, of which 2052 were gynecological emergencies. Relevant data were obtained from the patients' folders in the records unit of the department. Information obtained were entered into a data sheet and these included socio-demographic characteristics such as age, educational level, occupation, religion, contraceptive use and case presentation (complaints). The data collected were analyzed using Epi-info version 7 (CDC Atlanta Georgia, USA, 2016) and presented in tables as frequencies and percentages. Constraints encountered were that of improper record keeping and uncertainties in the actual age of the adolescents.

III. RESULTS

Out of a total of four thousand eight hundred and forty six (4,846)gynecological cases managed in this hospital over the study period, two thousand five hundred and eighty four (2,584) were adolescent gynecological cases, contributing 53.3% of all gynecological cases. Of the 2,584 adolescent cases, 2,052(79.4%) were gynecological emergencies.

Table I: Age distribution and case presentation of gynecological emergencies

	Frequency	Percentage (%)
AGE		
10-14	329	16
15-19	1,723	84
COMPLAINTS		
Incomplete miscarriage/abortion	880	42.9
Pelvic inflammatory disease (PID)	630	30.7
Ectopic pregnancy	268	13.1
Abnormal vaginal bleeding	193	9.4
Sexual assaults	8	3.9

Table II: Yearly frequencies (percentages) distribution of cases presented as emergencies.

Complaints	2012	2013	2014	2015	2016
Incomplete miscarriage /abortion	145 (16.5 %)	166 (18.8 %)	176 (20.0 %)	182 (20. 7%)	211 (24.0%)
PID	102 (16.2 %)	122 (19.4 %)	146 (23.2 %)	136 (21. 5)	124 (19.7%)
Ectopic pregnancy	41 (15.3 %)	42 (15.7 %	46 (17.2 %)	51 (19. 0%)	88 (32.8%)
Abnormal vaginal bleeding	22 (11.4 %)	36 (18.6 %)	38 (19.7 %)	40 (20. 7%)	57 (29.6%)
Sexual assault		13 (16.0 %)	17 (21.0 %)	19 (23. 5%)	23 (28.4%)

Table III: Socio-demographic distribution of adolescents with emergency gynecological complaints

EDUCATION	frequency	Percentage (%)
Primary	105	5.1
Secondary		
Junior	314	15.3
Senior	544	26.5
Tertiary	1089	53.1
OCCUPATION		
Nil occupation	22	1.1
student	308	15.0
applicant	325	15.8
apprentice	450	22.0
self employed	540	26.3
civil/public servant	407	19.8
MARITAL STATUS		
Single	1677	81.7
married	375	18.3
RELIGION		
Christians	2016	98.2
Muslims	15	0.7
Traditional practice	22	1.1

Table IV: Contraceptive usage and sexual relationships

CONTRACEPTIVES	Frequency	Percentage (%)
No knowledge	720	35.1
Male condom	872	42.5
Pills/injectables	244	11.9
After morning pill	140	6.8
IUCDs	76	3.7
SEXUAL PARTNERS		
Virgins	220	10.7
None	340	16.6
One	878	42.8
>1	614	29.9

IV. DISCUSSION

Access to health care and sources of education, information, and support available to the adolescent varies widely. The variations demand country-level analyses of patterns but despite these variations, key issues, barriers and challenges, as well as potential solutions, can be identified across the board [17].

The World Health Organization (WHO) reports that in Tanzania, for example, approximately half the number of adolescent patients seeking abortions were aged 17 years or younger[16]. From this review, adolescents between the ages of 15-19years formed the majority 1,723(84%) of the emergencies;880(42.9%)presented and were managed for incomplete abortions. These findings are similar to that of 42.1% of adolescents in Port Harcourt been sexually active and have had an abortion[17],630 (30.7%) were managed for PID, 268(13.0%) for ectopic pregnancies, 193 (9.4%) for abnormal vaginal bleeding and81(3.9%) for sexual assaults.

It is common knowledge that most adolescents attempt medical abortion at home which usually ends in incomplete abortions. Recent anecdotal reports show that young girls purchase misoprostol across the counter and ingest as much as 800-1000 microgram of the drugand insert an equivalent amount into the vagina to procure an abortion.The number of young girls seeking abortion is difficult to estimate since the procedure is illegal and criminal in Nigeria, hence it is done in extreme secrecy and often in unsafe environment.

Table II shows a progressive increase in cases of incomplete abortion from 145 (16.5%) in 2012 to 211 (24.0%) in 2016.PID showed a gradual increase from 102 (16.2%) in 2012 to 146 (23.2%) in 2014 but declined from136 (21.5%) in 2015 to124(19.7%) in 2016. Ectopic pregnancies, abnormal vaginal bleeding and sexual assault are however also on the increase.

The increase in cases of incomplete miscarriage/abortion is not unconnected with the self-procurement of abortion by the adolescents, while the reduction in cases of PID could be due to the increase health seeking potentials as guided by their peers and self-medication imbibed by the adolescents, leading to sub-optimal treatment predisposing to the increase incidences of ectopic pregnancies.

There is also an increasing awareness on the uses of barrier contraceptives which significantly reduces the incidence of HIV/STIs.

Campaigns on the mass media over the use of condoms to prevent the transmission of HIV/AIDS have also aided in the control of transmission of STIs, hence a reduction of pelvic inflammatory disease (PID). According to (Ahmed, Li Q and Tsui) the physically devastating potential consequences of unsafe abortion include cervical tearing, perforated uterus and bowel, hemorrhage, chronic pelvic infection and abscesses, infertility, endotoxic shock, renal failure, and death[14],[18].

Most adolescents are currently unable to further their education due to the present economic recession and high cost of living in the country. This study showed that 1,089 (53.1%) were still intertiary institutionsor had tertiary certificate. Those in secondary school or had completed secondary education were 858 (41.8%), while 105 (5.1%) were still in or had completed primary school. Loretta in Port Harcourt, South –South Nigeria [17] reported 80.1% of

adolescents aged 17-19 years as sexually active. This is slightly lower than 89.3% of adolescents in Calabar reported to have had sex before the age of 20 years according to findings from this study (Table IV).

Child marriage is not the norm in South-Southern part of the country, hence 1,677 (81.7%) of adolescents in this study were single while 375 (18.3%) in their late teens were married. A total of 1,492 (72.2%) of adolescents in this study were sexually active with some of them having more than one sexual partner. Those that are involved in casual sex without any regular sexual partners formed 340 (16.6%), while 10.7% were virgin. Cross River is a predominantly a Christian state, hence the size of 2,015(98.2%), Muslim 15 (0.7%).

The use of contraceptives was not very popular amongst the adolescents. The male condom was the commonest form of contraceptive used 872(42.5%). 720 (35.1%) of the adolescents have never used or are not aware of contraception. The "after morning pill" (Postinor 11) was commonly used by 140 (6.8%), while contraceptive pills or injectable contraceptive was used by 244 (11.9%) and copper T (Cu T) by 76 (3.7%). In addition to any other form of contraceptives, adolescents who are engaged in sexual activities should be encouraged to use barrier methods also as this provides some protection against STIs/AIDS, unwanted pregnancies and other sexually transmitted infections.

On a personal level, young people's care-seeking behavior may be restricted because of fear (of people finding out and other confidentiality issues that may result in violence), embarrassment, lack of knowledge, misinformation and myths, stigma, and shame according to (Blanc, Tsui, Croft and Trevitt)[19]. A range of people have an influenceon adolescents' access to information and services, including peers, parents, family members, teachers, and healthcare workers. These persons can be held responsible for the negative or positive influence exhibited by the adolescent.

V. CONCLUSION

Innumerable health and social challenges face young people in all countries; it is time to improve our understanding of this age group and to focus our energies on alleviating these problems. Political efforts need to be directed to providing youth-appropriate services, and the health establishment must follow a comprehensive, evidence-based approach that raises the capacity of health workers and implement bold initiatives for, and with adolescents[20]. Importantly, obstetricians and gynecologists—through their national associations and through FIGO at the international level—have an important role to play in the advancement of ASRH services so that healthcare workers move from being part of the problem to part of the solution. Healthcare workers are also well placed to influence policy and ensure service provision for those who need it. For example, healthcare workers can work to ensure young pregnant women receive early and tailored prenatal services to address their high risk and specific problems of anemia, malaria, HIV, and other STIs, as well as giving them special attention during obstetric care, given that they are most at risk of complications and death.Clarity and stronger enforcement of the child right acts (CRA, 2003) will support adolescent wellbeing through discouraging early marriages which are strongly linked to early pregnancy.

*Conflict of interest- The authors have no conflict of interest.

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