

Childhood and Adolescent Reproductive Tract Tumours in Zaria

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Abstract

Introduction/Context: Reproductive tract tumours are said to be rare in adolescents and children and the malignant variety are particularly rare. Their rarity however may lead to problems as the diagnosis may not be considered and individual clinicians may have insufficient experience to ensure appropriate treatment.

Objective: To determine the incidence of reproductive tract tumours amongst adolescents and children in Zaria.

Methods: The histopathology reports of all reproductive tract tumours in adolescents and children between January 1995 and December 2004 were retrieved. Information on age, presence of reproductive tract tumour, and histological diagnosis were analyzed.

Results: The total number of reproductive tract tumours seen in this period from all age groups was 527. Tumours from adolescents and children accounted for 7.6% (40). Benign tumours made up 55% (22) while malignant tumours accounted for 45% (18). The most common tumours were the teratomas (Mature 9, Immature 2) and hydatidiform mole, constituting 27.5% (11) each. Age groups incidence; 16-19yrs 62.5% (25), 11-15yrs 25.0% (10), 6-10yrs 10% (4), and 0-5yrs 2.5% (1).

Conclusion: Reproductive tract tumours among adolescents and children are not as rare as previously thought and with a high index of suspicion these tumours can be detected early and prompt treatment instituted.

Key Words: Adolescent, Tumours, Reproductive Tract, Cancer

Introduction

Adolescent reproductive health is a contemporary issue and the frequently addressed problems in this age group are either social, hormonal or related to sexuality. Worldwide literature on gynaecological neoplasms in adolescents and children is scarce and this is particularly so in Nigeria.¹ This study intends to highlight the occurrence of gynaecological tumours in adolescents and in children.

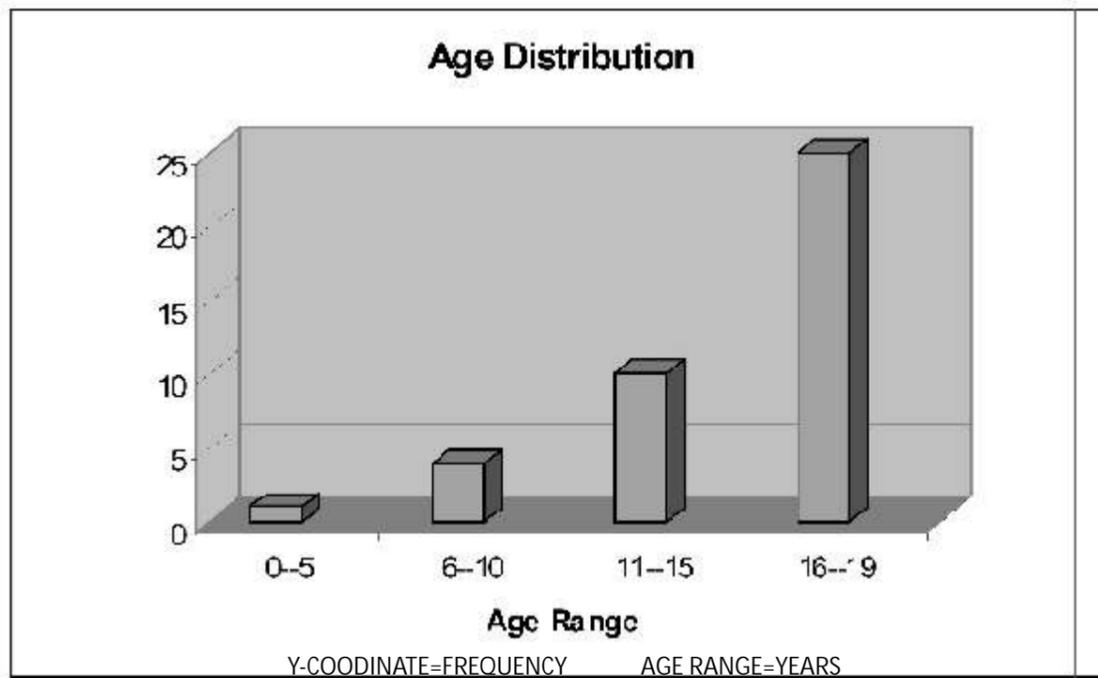
Gynaecological tumours are said to be rare in adolescents and children especially the malignant variety.^{2,3} Its rarity may lead to problems of diagnosis as individual clinicians may have insufficient experience to ensure appropriate treatment.² It has been reported that 25% of all childhood ovarian tumours elude diagnosis until exploratory laparotomy is performed²

Tumours of the vulva are particularly rare in this age group. Sarcoma butyroides,

malignant melanoma and squamous cell carcinoma occur rarely.³ Specialists may see haemangiomas more commonly.⁴ Clear cell adenocarcinoma related to vaginal adenosis and exposure to diethylstilbestrol (DES) in utero is now rare.⁵ Gartner's duct cysts may also be seen.⁴ The most common tumour of the cervix and vagina in children and adolescents under the age of 16 years is sarcoma butyroides.⁴ uterine tumours whether benign or malignant are extremely rare in childhood and adolescence.⁴ Ovarian tumours are the most common genital tract tumours in girls under the age of 16 years.^{2,3} The most common is ovarian teratoma, which accounts for approximately 30% of the

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Figure 1: Age Distribution of reproductive tract tumours in children & adolescents



total^{2,3} Ovarian cysts can be seen in the fetal and neonatal periods probably due to high levels of maternal Human Chorionic Gonadotrophin (HCG).³ Functional ovarian cysts including follicular cysts and corpus luteum cysts are seen in girls who are ovulating and these benign lesions should be considered when ruling out tumours in this age group.

Materials and Methods

All the surgical specimens of reproductive tract tumours in all age groups received in the Department of histopathology of Ahmadu Bello University Teaching Hospital between 1st January, 1995 and 31st December 2004 were retrieved. Those of children and adolescents were then studied in detail. Clinical data of these patients with histological diagnosis of reproductive tract tumours were extracted from the laboratory bench books and referral clinical notes. Relevant information on the age of patient, histopathological diagnosis, and sites of tumour occurrence were analyzed using Microsoft Excel; frequency tables and figures

were then generated.

Results

The total number of reproductive tract tumours seen in this period from all age groups was 527. Tumours from adolescents and children accounted for 7.6% (40). Benign tumours made up 55% (22) while malignant tumours accounted for 45% (18). Fifty percent of the tumours were from the ovary. The most common tumours were the teratomas (Mature 9, Immature 2) and hydatidiform mole, constituting 27.5% (11) each. Four cases of Choriocarcinoma were seen (10%). One case each of Kaposi's Sarcoma(2.5%) and adenocarcinoma(2.5%) of the Uterine Cervix were seen. The peak incidence age group was 16-19yrs with 62.5% (25) of the tumours occurring, followed by 11-15yrs group with 25.0% (10), while 6-10yrs and 0-5yrs age groups had 10% (4) and 2.5% (1) respectively [Table III and figure I]. The median ages of the tumours were as follows:- Benign cystic teratoma 18yrs, hydatidiform mole 17yrs, choriocarcinoma 18yrs and Burkitt's

Table 1: Reproductive Tract Tumour Types in Children & Adolescents

Type of tumour	Number	Site	Percentage
Hydatidiform mole	11	Endometrium	27.5
Choriocarcinoma	4	Endometrium	10.0
Burkitts lymphoma	5	Ovary	12.5
Teratoma	11	Ovary	27.5
Dysgerminoma	2	Ovary	5.0
Yolksac tumour	2	Ovary	5.0
Sertoli Leydig cell tumour	1	Ovary	2.5
Adenocarcinoma	1	Cervix	2.5
Kaposi sarcoma	1	Cervix	2.5
Leiomyoma	2	Uterus	5.0

Lymphoma 13yrs.

Immature teratoma occurred in 9 and 19yrs, dysgerminoma 9 and 13yrs, leiomyoma 3 and 6yrs, Endodermal sinus tumour 14 and 16yrs, Adenocarcinoma and Kaposi's sarcoma of the cervix 15yrs and 18yrs respectively. Seroli leydig cell tumour at 15yrs.

Discussion

Germ cell tumours are said to accounts for 60-70% of all ovarian tumours in adolescents and children.^{2,3} in this study it accounted for 37.5% of the tumours. The commonest germ cell tumour in this age group is said to be mature (cystic) teratoma² as was seen in this study, accounting for 22.5% of the tumours, only surpassed by hydatidiform mole.

Table 3: Hydatidiform mole & Age Distribution

Age	Complete	Partial
15	0	1
16	0	1
17	2	2
18	1	2
19	0	2
Total	3 (27.3%)	8 (72.7%)

Adolescent and childhood tumours accounted for 7.6% of all the tumours in this period. Forty five percent of the tumours were malignant and 55% benign. This was unlike the findings by Banjo and Elesha¹ in Lagos who studied only paediatric reproductive tract tumours between 1985 and 1990; 83.3% of their tumours were benign and 16.7% malignant. Paediatric tumours accounted for 1.1% of all gynaecological neoplasms in their study. The differences in their results with ours may be due to the fact that they studied gynaecological tumours only in the paediatric age group. Both studies showed the ovary as the commonest sites of gynaecological tumours, 50% in this study and 66.6% in theirs. This has also been

shown in other studies.⁶ The incidence of hydatidiform mole was high in this study accounting for 27.5% of cases. This was not unexpected because of the high incidence found in Africa and the far East⁵ The incidence of Gestational Trophoblastic Diseases (GTD) in Nigeria is said to be 4.88 per 100 deliveries⁷ The high incidence of GTD in this study can be explained by the fact that in the Northern part of Nigeria where the study was conducted has a high prevalence of adolescent marriages and pregnancies. Ind T et al in Israel also found a rising incidence of gestational trophoblastic tumours and cervical cancers amongst adolescent women due to increasing sexual activity⁸ Five cases of Burkitt's lymphoma of the ovary

was seen which was not surprising because it is a common tumour in our environment due to the original hypothesis that an arthropod borne (possibly mosquito) virus may be responsible⁹ Kaposi's sarcoma of the cervix was seen in an 18 year old, who was eventually confirmed to be HIV positive. This patient may have married early and started having sexual activity hence may have been exposed to the virus long enough which accounts for her manifestation of one of its complications, though not very common.

Conclusion
The occurrence of reproductive tract tumours amongst adolescents and children poses a diagnostic challenge to clinicians, so a high index of suspicion is needed for its accurate diagnosis and subsequent management. This is particularly important in areas with a high incidence of early marriage where gestation related tumours can occur commonly in this age group. Reproductive tract tumours as can be seen in this study are not rare as previously thought amongst adolescents and children.

Table 2: Age range & Frequency of Reproductive tract Tumour types

Age{yrs}	Total No.	Percentage	Tumour Types
0-5	1	2.5	Cellular Leiomyoma(1)
6-10	4	10.0	Cellular Leiomyoma(1), Burkitts lymphoma(1), Immature teratoma(1), Dysgerminoma (1)
11-15	10	25.0	Benign cystic teratoma (2), Dysgerminoma(1), Burkitts Lymphoma(3), Hydatidiform mole (1) Poorly differentiated adenocarcinoma(1), Sertoli Leydig cell tumour(1) Endodermal sinus tumour,(1)
16-19	25	62.5	Endodermal sinus tumour,(1), Burkitts lymphoma(1), Hydatidiform mole(10) Immature Teratoma(1) Choriocarcinoma(4) Kaposi,s sarcoma (1) Benign cystic teratoma (7)
	40	100	

References

- Banjo A. A. F and Elesha S. O. Paediatric Gynaecological Neoplasm in Lagos, Nigeria. *Nig Quat Jour Hosp Med.* 1993; 5 {1}: 7 11.
- Chang I. MD; Muram D. MD; Paediatric and Adolescent Gynaecology in current Obstetrics & Gynaecologic Diagnosis and Treatment; De Cherney a.H, MD; Nathan Lauren MD (Eds), 9th Edition Lange Medical Books/McGraw Hill, New York 2003; 611 613.
- Garden S.A., Tropping J., Gynaecological Tumours in Childhood and Adolescence In: Garden S.A., Tropping J. (Eds); Paediatric and Adolescent Gynaecology for MRCOG and Beyond. RCOG Press, Liverpool, 2001; 79 87.
- Fattaneh A. T., Peter D., WHO Classification of Tumours, International Agency for Research on Cancer (IARC) Pathology and Genetics of Tumours of the Breast and Female Genital Organs. IARC Press, Lyon, 2003; 114 34.
- Akin A. A., Trophoblastic Tumours in: Akin A. (Ed); *Text book of Obstetrics & Gynaecology for medical students. Univ. Serv. Educ. Pub. Ltd, Ibadan* 1988. Vol. 1, Pg 271 272.
- Ikimalo J., Seleye Fubara; Ovarian teratomas in Port Harcourt; A Clinicopathologic Studt of 83 cases. *Trop. Jour. Obstet. Gynaecol.* Oct 2002; 19 {2}; 112-114.
- Osamor J.O et al; A Clinicopathological study of complete and partial hydatidiform moles in a Nigerian Population; *J. Obstet. Gynaecol.* 2002; 423 425.
- Ind T., Shepherd J., Pelvic Tumours in Adolescence, *Best Pract. REs. Clin. Obs. Gynaecol.* 2003; Feb 17 (1): 49 168.
- Olweny C. L. M., Neoplastic diseases, lymphoid malignancies (Burkitt's lymphoma) In: Diseases of Children in the subtropics and tropics. Paget stand field et al (Eds); Astra Zeneca, London. 4th Edition, 2001, 873 882.