



Histological Patterns of Gynecological Lesions in Enugu, Nigeria. A Five-Year Review from January 1, 2000 to December 31st 2004.

***B.C OZUMBA**M.A NZEGWU and *** A.ANYIKAM**

*Department of Obstetrics and Gynecology, University of Nigeria Teaching Hospital,
Enugu, Nigeria.

**Department of Morbid Anatomy, UNN.

***School of Medicine, University of Texas Health Science Center at San Antonio (UTHSCSA),
San Antonio, TX, USA.

Email: benozumba@hotmail.com

ABSTRACT

The paper characterizes the histological types of gynecological lesions in Eastern Nigeria. 2. Highlights the sex and age variations of these lesions as a base line data and compares results with similar studies from other places for planning of gynecological cancer education, screening programs and health resource allocations in Eastern Nigerian States.

The records of the Department of Morbid Anatomy UNTH, Enugu, Nigeria was reviewed. Seven hundred and seventy seven gynaecological samples were received and analyzed over a period of 5years i.e., from January 1, 2000-December 31, 2004.

Seven hundred and seventy seven gynecological specimens were received. Benign lesions contributed a majority with 642 cases (82.6%). The breakdown of this figure is as follows; uterine leiomyomas 201cases (25.9%) presenting at a mean age range of 28.5years-47.7years. Retained product of conception 161(20.7%), seen at a mean age range of 24.9-36.9years. Cervicitis mostly Human papilloma virus related 33(4.2%) was seen at 28.7years-54.3years on the average. Cervical cysts and polyps 65(8.4%), were seen at a mean age 22.3-46.9years. Gestational trophoblastic disease 41(5.3%) with mean age of 21.7- 37.7 years. Adenomyosis and endometriosis, 34(4.4%) presented at a mean age range of 28- 50 years. Symptomatic endometrial hyperplasia was seen at an average age of 43years with 23(3%). Uterovaginal prolapse was seen at an average age of 61years with 5(0.6%). Secretory endometrium was seen in women of mean age 36years with 16(2.1%). Benign ovarian lesion were 32(4.2%) and included benign cystic teratoma 10, serous cyst adenoma 5, fibroma 6, corpus luteum cyst 10, Mullerian cyst 1. Tubal lesions were 34(4.5%); with Tuberculous salpingitis 3, ectopic gestation 25 and bacterial salpingitis 6 cases (.72%), was seen as a component of pelvic inflammatory disease. Vaginal lesions, only Bartolins cyst 2(0.3%).

The malignant lesions are composed of 135 cases (17.4%). Cervical carcinoma was the most common malignancy with 110 cases (14.2%) and was predominantly of the invasive squamous cell type in 79 specimens (10.2%). The invasive squamous type presented with a mean age of 43.7-70.3 years, cervical adenocarcinomas was 19(2.45%) with a mean presentation age of 41-66 years. Cervical intraepithelial neoplasm 12(10.9%) was seen at an earlier average age range of 22.2-62.4 years. Malignant ovarian lesions 16 (2.1%) including ; ovarian clear cell carcinomas 1, endodermal sinus tumor 1 and transitional cell carcinomas 1. Malignant Brenner 3, Granulosa cell tumour 4, serous cyst adenocarcinomas 6. Leiomyosarcomas of the uterus were 4(.5%). Finally only 5 choriocarcinomas were seen (0.6%).

The most common gynaecological lesion in our environment remains leiomyomata uteri with 201(25.5%) and it occurred at a mean age range of 29.5-47.7years. The most common malignancy was cervical carcinoma representing 110 cases mainly the invasive squamous cell type. It also represents the second most common malignant female cancer second only to cancer of the breast. The mean age of cervical carcinoma in situ varied from 22.2-62.4 years. But invasive squamous cell carcinoma was seen from a mean age of 42.7years to 55years.

INTRODUCTION

Gynecological lesions are not uncommon in Eastern Nigeria, where they cause considerable reproductive ill health and mortality. In our environment there are scarcely any reliable figures. Data on gynecological malignancies in some developing countries show a preponderance of cancer of the cervix and in these areas, it occurs almost a decade earlier than in the western World [1,2,3]. This paper seeks to establish a data base with regards to the histological types of gynecological lesions. This data base will be helpful in other to combat gynecological cancer menace through actions like health education, screening programmes, and appropriate resource allocation.

MATERIAL AND METHODS

The files and slides of gynecological specimens from the department of Morbid Anatomy UNTH were searched for cases of gynecological lesions. One hundred and sixty three cases were found from January 2000 and December 31st 2004. They were reviewed and analyzed for histological types, age and sex variations. The Statistical Package for Social Sciences was used to find their mean age of presentation and standard deviation.

RESULTS

Seven hundred and seventy seven gynecological specimens were received. Benign lesions formed an overwhelming majority with 642 cases (82.6%). The breakdown of this figure is as follows; uterine leiomyomas 201cases (25.9%) presenting at a mean age range of 28.5years-47.7years. Product of conception had 161(20.7%), and was seen at a mean age range of 24.9-36.9years. Cervicitis mostly Human papilloma virus related was 33(4.2%) and was mostly seen at between 28.7years-54.3years on the average. Cervical cysts and polyps were 65(8.4%), and were seen at a mean age 22.3-46.9years. Gestational trophoblastic disease had a frequency of 41(5.3%) with mean age of 21.7- 37.7 years. Adenomyosis and endometriosis had 34(4.4%) and presented with a mean age range of 28- 50 years. Symptomatic endometrial hyperplasia was seen at an average age of 43years with 23(3%). Uterovaginal prolapse was also a disease of the elderly seen at an average age of 61years with 5(0.6%). Secretory endometrium was seen in endometrial currettings of women of mean age 36years with 16(2.1%). Benign ovarian lesion were 32(4.2%) and included benign cystic teratoma 10, serous cyst adenoma 5, fibroma 6, corpus luteum cyst 10, Mullerian cyst 1. Tubal lesions were 34(4.5%); with Tuberculous salpingitis 3, ectopic gestation 25 and bacterial salpingitis 6 cases (17.4%). It presented as a component of pelvic inflammatory disease. Vaginal lesions, only Bartolins cyst 2 cases (0.3%) wereseen. The malignant lesions is composed of 110 specimens (14.2%) of carcinoma of the cervix , and was predominantly of the invasive squamous cell type in 79 specimens (10.2%).It presented with a mean age of 43.7-70.3 years, cervical adenocarcinomas 19(17.3%) with a mean presentation age of 41-66 years. Cervical intraepithelial neoplasm 12(10.9%) was seen at an earlier average age range of 22.2-62.4 years. Malignant ovarian lesions 16 cases (2.1%); ovarian clear cell carcinomas 1, endodermal sinus tumor 1 and transitional cell carcinomas 1. Malignant Brenner 3, Granulosa cell tumour 4 average age 31.3 years, serous cyst adenocarcinomas 6; all presented at a mean age 31.3 years. Leomyosarcomas of the uterus were 4(.5%). Finally only 5 cases of choriocarcinomas were seen (0.6%).

DISCUSSION

The most common lesion documented in this report is uterine leiomyomas with 201cases (25.9%) presenting at a mean age range of 28.5years-47.7years. It will appear that most women afflicted present, with dysmenorrhoea, haemorrhagia , uterine mass and sometimes infertility as the commonest symptoms. Uterine fibroids are very common non cancerous growths that develop in the muscular wall of the uterus [4]. They rarely develop into cancer (<0.1% of cases)[5]. Fibroids may occur in any of the three layers or coats of the uterus. As such, there could be Intramural (within the perimetrium), submucosal (within the endometrium) and pedunculated i.e. suspended by a stalk within or outside the uterus. This report clearly observes that uterine fibroids are the most common benign tumours found in women. Their incidence rates in women in our population are beyond the scope of this report, although it appears to be quite a common disease. Cramer and Patel estimated that fibroids could affect 77% of women in the United States [6]. Its pathological significance hinges on its being the commonest gynaecological tumour and it's being implicated as a cause of infertility and accounted for 7.4% of that studied population [7]. Finally most of the time fibroids grow in women of child bearing age [8] making surgical intervention inevitable with its attendant morbidity.

Table:1 shows the age distribution of gynecological malignancies.

	N	%	Age mean	std
TOTAL SAMPLES	777		38.2	13.3
DIAGNOSTIC CATEGORIES (BENIGN LESIONS).	642	82.6%		

Uterine Leiomyoma	201	25.9		38.6	9.1
Retained products of conception	161	20.7		30.9	6.0
Cervicitis mostly human papilloma virus	33	4.3		41.5	12.8
Cervical cyst and polyps	65	8.4		34.6	12.3
Gestational trophoblastic disease	41	5.3		29.7	8
Adenomyosis and endometriosis.	34	4.4		39	11
Symptomatic endometrial hyperplasia	23	3		43	12.8
Uterovaginal prolapse	5	0.6		61.2	17.7
Secretory endometrium	16	2.1		36.3	15.2
Benign ovarian lesion (cystic teratoma)	10	1.3		30.1	9.5
Benign ovarian (serous cyst adenoma)	5	0.6		42.6	13.9
Benign ovarian lesion (fibroma)	6	0.8		35.5	8.8
Benign ovarian (corpus luteum cysts)	10	1.3		23.6	5.6
Benign ovarian (Mullerian cysts)	1	.1		32.0	-
Tubal lesions (Tuberculous salpingitis)	3	0.4		25.3	6.2
Salpingitis	6	0.8		35.2	18.1
Tubal lesions (Ectopic gestation)	25	3.2		28.9	5.3
Adenocarcinoma	19			53.5	12.5
Choriocarcinoma	5			29.8	6.8
Nabolithan cyst	7			50.0	14.0
Batholin's cyst	2			34.0	12.7
DIAGNOSTIC CATEGORIES (MALIGNANT LESIONS).	135	17.4			
A.Cervical carcinomas inclding:	110	14.2%			
1.Invasive squamous cell carcinomas	79			43.7	13.3
2.Cervical adenocarcinomas	19			41	12.5
3.Cervical intraepithelial neoplasia (CIN)	12			42.3	20.1
B.Malignant Ovarian lesions:	16	2.1%		31.3	
1.Ovarian clear cell carcinoma	1				
2.Endodermal sinus tumour (Ovarian)	1				
3.Malignant Brenner Ovarian	3				1.5
4.Granulosa cell tumour Ovarian	4				6.8
5.Transitional cell carcinoma Ovarian	1				
6. serous cyst adenocarcinomas	6				
C. leiomyosarcomas	4	.5			
D. choriocarcinomas	5	.6			
TOTAL	777	100%			

One hundred and sixty-one (20.7%), cases of abortions with histology showing products of conception were seen at a mean age range of 24.9-36.9years. Most (85%) were spontaneous and occurred in the first trimester in mostly primips, while the rest were complicated induced criminal abortions. These cases may not be true reflections of the rate of criminal abortion since a lot more may likely end up in private hospitals rather than at the tertiary institution where we practice. Cervicitis mostly Human papilloma virus related was 33(4.2%) and was mostly seen at between 28.7years-54.3years on the average. The introduction of HPV vaccines may therefore be beneficial but a detailed study using antibodies to carcinogenic stains of human papilloma virus is needed to further quantify the percentage positivity in our environment. Gestational trophoblastic disease had a frequency of 41(5.3%) with mean age of 21.7- 37.7

years. They were hydatidiform moles. Cervical cysts and polyps were 65(8.4%), and were seen at a mean age 22.3-46.9years. Most were Nabothian cysts and inflammatory pseudopolyps. Adenomyosis and endometriosis had 34(4.4%) and presented with a mean age range of 28- 50 years. Symptomatic endometrial hyperplasia was seen at an average age of 43 years with 23(3%), mainly as an irregular vaginal bleeding .Uterovaginal prolapse was also a disease of the elderly seen at an average age of 61years with 5(0.6%). The mean parity of the women involved was mainly 5-6 live births, with a few of them having a parity of 2-3 with instrumental delivery. Secretory endometrium was seen in endometrial currettings of women of mean age 36years with 16(2.1%). Benign ovarian lesion were 32(4.2%) and included benign cystic teratoma 10, serous cyst adenoma 5, fibroma 6, corpus luteum cyst 10, Mullerian cyst 1. Tubal lesions were 34(4.5%); with Tuberculous salpingitis 3, ectopic gestation 25 and bacterial salpingitis 6 cases (17.4%). It presented as a component of pelvic inflammatory disease. Vaginal lesions, only Bartolins cyst 2 cases (0.3%)were seen. Cancer of the cervix is the commonest gynaecological malignancy in the female as seen in this study, representing 110 cases (14.2%) of all gynaecological lesions. This finding collaborates previous reports from Nigeria [9]. It is even more important in the developing countries where it used to be the most common malignant disease [10, 11].Recently however it has been ranked the most common malignancy, second only to breast cancer in our environment according to a published report 12. This fact is further collaborated by some other studies [13-16]. About half a million new cases are seen world wide each year most occurring in developing countries where they present late [13,14] when only palliative treatment can be given [15]. Cancer reported as being responsible for about 51 million deaths yearly out of which cervical cancer accounts for 8.5% most of which occur in the developing countries [16]. In Nigeria the national incidence of cervical cancer is 250/100,000 [17].

Carcinoma of the cervix was predominantly of the invasive squamous cell type in 79 specimens (10.2%).It presented with a mean age of 43.7-70.3 years, cervical adenocarcinomas 19(17.3%) with a mean presentation age of 41-66 years. Cervical intraepithelial neoplasm 12(10.9%) was seen at an earlier average age range of 22.2-62.4 years. The long transition time from a premalignant lesion to frank cancer of the cervix affords ample time for early detection and nearly complete cure even in secondary health care centers. However this window of opportunity which has enabled the developed countries to reduce the incidence of cancer of the cervix [18] would be wasted if the level of screening is low. This paper documents 12 cases of cervical intraepithelial lesions which are judged as early and 79 cases of invasive squamous cell carcinoma with 19 cases of invasive adenocarcinomas, three -fourths of which were either a stage three or stage four disease which are very late presentations. Cancer of the cervix is a preventable disease and a key aspect of its prevention is the detection of the premalignant form by cervical screening. Indirect evidence from this study is lending weight that ours is a poorly screened society for paps smear which cost a paltry 1000 Naira (USD \$8.30) per screening. It would appear that unless serious efforts are made by government and donor agencies to educate our women including the literate ones on the need for a regular pap smear for every sexually active female we may come close to the control of this scourge of cervical cancer deaths in a short while.

The second most common gynaecological cancer was malignant ovarian lesions 16 cases (2.1%); comprising of ovarian clear cell carcinomas 1, endodermal sinus tumor 1 and transitional cell carcinomas 1. Malignant Brenner 3, Granulosa cell tumour 4 average age 31.3 years, serous cyst adenocarcinomas 6; all presented at a mean age 31.3 years. Leomyosarcomas of the uterus were 4(.5%), they were all malignant cases seen denovo. Finally only 5 cases of choriocarcinomas were seen (0.6%).

In conclusion the most common uterine neoplasm in our environment is uterine leomyoma and it's a disease of women mainly in the reproductive age group making treatment inevitable to avoid attendant morbidity and possibly its negative association with infertility. The most common malignancy seen is cancer of the cervix mainly as late cases making it imperative to double efforts aimed at popularizing paps screening.

REFERENCES

1. Edington, G.M., and Maclean, C.M.U. (1965). A cancer rate Survey in Ibadan, Western Nigeria. *Brit.J.Cancer.*19:470,.

2. Egwuatu, V.E.and Ejeckam, G.C. (1980).An analysis of tumours of the female genital tract in Enugu Nigeria. A hospital based tumour registry review.*Bull.Cancer.(Paris)*.67:535.
3. Cramer, D.W.and Cutler, S.J. (1974).Incidence and histopathology of malignancies of the female genital organs in the United States.*Amer.J.Obstet.Gynec.*118:443, 1974.
4. Goodwin SC, Spices JB, Worthington-Kirsch R, Peterson E, Pron G, Li S, Myers ER (2008). Uterine artery embolization for treatment of leiomyomata : Long term outcomes from the Fibroid Registry. *Obset. Gynecol.* 111(1): 22-33.
5. Levy B, Mukhejee T, Hirschhorn K (2000). Molecular cytogenetic analysis of uterine leiomyomas and leiomyosarcoma by comparative genomic hybridization. *Cancer Genet. Cytogenet.* 12(1): 1-8.
6. Cramer SF, Patel A (1990). The frequency of uterine leiomyomas. *Am.J. Clin. Pathol.*, 94: 435-438.
7. Ekwere PD, Archibong EI, Bassey EE, Ekabua JE, Ekanem EI, Feyi Waboso P (2007). Infertility among Nigerian Couples as seen in Calabar, *Port Harcourt Med. J.* 2: 35 – 40.
8. Newbold RR, DiAugustine RP, Risinger JI, Everitt JI, Walmer DK, Parrott EC and Dixon D (2000). Advances in uterine leiomyomas research: Conference overview, summary and future research recommendations. *Environ. Health Perspect.*, 108(5): 769-773.
9. Adefuye PO. Knowledge and practice of cervical screening among professional health workers in a suburban district in Nigeria. *Nigerian Medical Practitioner* 2006;50:19-22
10. Mandong BM. Malignant disease in Jos University Teaching Hospital. *Nigerian Medical Practitioner* 1999; 37:55-56
11. Duncan JTK. Radiotherapeutic management of cancer of the cervix in Nigeria. *Ghana Med J* 1973;12:374
12. Nzegwu M.A, Anyikam A, Ozumba BC, Ugochukwu AI, Agu K. (2008). Malignant breast lesions in Eastern Nigeria. *Saudi Med J*; Vol. 29 (5) 461
13. Campbell OB, Adu FD, Danwatta FD. (1997). Human immunodeficiency virus antibody positivity in cancer patients undergoing radiotherapy in Ibadan: clinical findings, pathogenesis and therapy. *Nigerian Medical Journal* ;32:90-92
14. Solanke TF. An overview of cancer in Nigeria.In: Solanke TF, Adebamowo CA (eds). (1996). Report of a workshop on state of the art in oncology in Ibadan and Ife. National Headquarters of Cancer Registries in Nigeria, Ibadan,7-12.
15. Adebamowo CA, Ajayi OO, Breast cancer in Nigeria. *West Afr J Med* (2000);19:179-194
16. Madong BM, Madaka AKJ, Mannaseh AN. (2003). Malignant disease in Jos: a follow up. *Ann Afr Med*;2:48-53
17. Adewole IF, Edozien EC, Babarinsa IA, et al. (1997). Invasive and in situ carcinoma of the cervix in young Nigerians. A clinicopathologic study of 27 cases. *Afr J Med Sci* ;26:191-193
18. Hakama M, Joutsenlahti U, Virtaren A, et al. (1975).Mass screening for cervical cancer in Finland 1963-71. Organization, extent and epidemiological implications. *Ann Clin Res*;;7:101-111.