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Endometrial Histologic Patterns of Abnormal Uterine Bleeding in Port Harcourt, Nigeria.

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ABSTRACT

An abnormal uterine bleed is an indication of a possible hormonal or structural defect in the reproductive system. This anomaly may be evident in examination of the endometrial extracts and knowing the common gynecological disorders associated with abnormal uterine bleeding may aid prompt management. To determine the histological pattern from biopsy specimen of patients with abnormal uterine bleeding.Retrospective descriptive study of endometrial biopsy specimen for a ten year period at the University of Port Harcourt Teaching Hospital. Histological records of patients were examined, information on age and histological diagnosis were collated. Data was analyzed and presented in frequency table and percentages. A total of 408 endometrial samples are examined. The mean age was 25.1 ± 7.1 years with an age range of 16-72 years. Abnormal uterine bleeding was commonest in age group 30-39 years. The commonest histopathological diagnosis was products of conception (67.9%). Endometrial polyps were identified as the commonest benign neoplastic lesion in women of reproductive age while malignancies accounted for 3.2% of endometrial pathologies with endometrial adenocarcinoma being the commonest. Products of conception are very common in women of reproductive age in our environment while malignant lesions should be considered in perimenopausal/menopausal women with features of abnormal uterine bleeding.

Keywords: Abnormal uterine bleeding, Histologic patterns.

INTRODUCTION

Abnormal uterine bleeding is one of the common reason women seek medical care in the gynaecology clinic and accounts for two third of hysterectomies in the developed countries.¹ There are wide range of histologically identifiable endometrial disorders ranging from hormonal changes causinghyperplasia to carcinoma.^{2,3}

An abnormal uterine bleeding may involve any disturbance of the regularity, frequency, duration and volume of menstrual flow which cause could be physiological, pathological or pharmacological.⁴ Irrespective of the cause of the abnormality, its consequence can range from causing morbidities associated withrisk of iron deficiency, disturbance of the normal functionality, hospitalization and transfusion to causing mortality in patients with malignant aetiology.⁵

Endometrial samples of lesions can be obtained via direct visualization of the uterine cavity-hysteroscopy, dilatation and curettage, pipette sampling to the use of vabra aspiration of uterine contents among other methods.⁶The need to histologically evaluate

endometrial tissue cannot be over emphasized, as it aids in the appropriate and accurate categorizationof the endometrial disorders to proffer specific therapy to the patient.^{6,7} This is so because ovulatory and anovulatory uterine bleedings are managed differently and the possible cause of abnormal uterine bleeding also varies between the premenopausal and postmenopausal women.

Some authors have argued that endometrial curettage is being over used as a diagnostic tool and that its diagnostic yield is very low.⁸However, dilatation and curettage was considered as the method of choice in the evaluation of contents of the uterus and has been associated with 96% accuracy in the detection of endometrial pathologies.⁹

This study seeks to determine the prevalent histopathological findings in patients with abnormal uterine bleeding in our environment; to improve the accuracy of clinical diagnosis and to provide the platform for empirical treatment among clinicians before the confirmatory diagnosisis reached. This would go along way to reducing morbidity and mortality that be associated with delays in the diagnosis especially in areas with drought of expertise for analysis of endometrial tissues.

MATERIALS AND METHODS

This is a record based retrospective descriptive study of all the endometrial biopsies received at the Anatomical Pathology Department of the University of Port Harcourt Teaching Hospital, Port Harcourt, Nigeria from January, 2004 to December 2013. Histological records of patients were extracted from the histopathological surgical day book. Information of menstrual history, age and histological diagnosis were collated in a prestructured spreadsheet. Data was analyzed and presented in frequency table and percentages.

The permission for the study was obtained from the Head, Department of the Anatomical Pathology of the UPTH and the Ethics committee of the Teaching Hospital.

RESULTS

During the 10year period under review, a total of 408 endometrial biopsies were received.

The mean age of the studied population was 25.1 ± 7.1 years with age range of 16-72 years while the peak age group was 30-39 years old and accounted for 47.9%(195) of cases. This is followed by the 40-49 age group which accounted for 39(9.6%) cases with the least age group been 70-79 years (2.5%).

The most common histopathologic diagnosis of the extracts from the endometrial cavity were products of

conception and was commonly diagnosed in the 20-39 year old bracket(63.2%). The most common neoplastic benign diagnosis was endometrial hyperplasia which was seen in 26(6.4%) of cases. Among this group, 38.5%(10) were in the age bracket 40-49 year old with the least in the age group of 50-60 years (11.5%).

Endometrial adenocarcinoma accounted for 64.3%(9) of cases of malignancy identified from endometrial extracts and was more evident outside the reproductive age group with the least common diagnosis been endometrial stromal sarcoma. Choriocarcinoma was more predominant among the reproductive age group of 20-39 years.

Malignancies accounted for 13(3.2%) of cases. The most common malignancy was endometrial adenocarcinoma followed by choriocarcinoma (Table 2).

The histopathological diagnosis of endometrial adenocarcinoma was most commonly encountered in the 60-69 age group and in the 50-59 age group. Choriocarcinoma was the second encountered malignancy 4(1.0%) and was seen mostly in the 30-39 years age bracket.

Table 2 showed the histological patterns - which identified non-neoplastic lesions as the commonest constituting 77.6%(309) of the study population, benign neoplastic, 15.7%(50) and malignant neoplastic 3.2%(14) and others 5.1%(21)

Histological Diagnosis		Age distribution							
		10-19	20-29	30-39	40-49	50-59	60-69	70-79	TOTAL
Non-neoplastic	Products of	6	106	152	11	1	0	0	277
	conception								
	Endometrial	3	5	8	5	0	0	0	21
	phase								
	Inflammatory	0	3	4	3	2	0	0	12
	conditions								
Neoplastic -Benign	Endometrial polyp	0	5	6	5	1	1	0	18
	Leiomyoma	0	6	6	1	0	0	0	13
	Hydatidiform	0	3	3	1	0	0	0	7
	mole								
	Endometrial	0	6	7	10	3	0	0	26
	hyperplasia								
- Malignant	Adenocarcinoma	0	0	0	1	3	4	1	9
	Choriocarcinoma	0	1	3	0	0	0	0	4
	Endometrial	0	0	0	0	0	1	0	1
	stromal sarcoma								
Others	Unrepresentative	2	6	6	2	4	1	0	21
TOTAL		11	14	195	39	14	7	1	408

 Table 1:Histological patterns of endometrial samples and age distribution

HISTOLOGICA	NO OF PATIENTS (%)				
NON NEOPLASTIC	Products of conception	276 (69.6%)			
	Endometrial phase	21 (5.1)			
	Inflammatory condition	12 (2.9)			
BENIGN	Leiomyoma	13(3.2)			
	Endometrial polyps	18 (4.4)			
	Hydatidiform mole	7 (1.7)			
	Endometrial hyperplasia	26 (6.4)			
MALIGNANT	Adenocarcinoma	9 (2.2)			
	Choriocarcinoma	4 (1.0)			
	Endometrial stromal sarcoma	1 (0.2)			
Others		21 (5.1)			
Total		408 (100)			

Table 2: Frequency of histological pattern of endometrial biopsy

DISCUSSION

Any abnormal vaginal bleeding during a person's lifespan is a source of concern and evokes both psychological and physical concerns for the person involved necessitating consultation with a gynaecologist¹⁰. These visits constitute about 30% of outpatient gynaecological consultations in developed countries of the world.¹⁰

These abnormalities observed may be as a result of interplay of hypothalamo- Pituitary axis factors among others reasons; with distribution of pathologies been identified to be age specific^{11,12} which is supported by findings in this study. The presence of products of conception as the most predominant anomaly, is a reflection of the fact that most of the patients samples examined are in the sexually active age group of 20-49 years who in the event of an unwanted pregnancy may resort to procurement of illegal terminations of pregnancy with it attendant complications. The patients only present when the complications would not be handled by the attending physician who usually would not had had any prior information on the termination, since it is illegal in this country. Hence, it becomes imperative that all attending physicians should have a high index of clinical suspicion to do a basic pregnancy test in women who present to them with abnormal uterine to exclude a pregnancy before venturing into more invasive procedures.

A careful appraisal of Table one showed an increase in the incidence of endometrial hyperplasia at 40- 49 years with a takeover by the presence of malignancy of the endometrium from the age of 50 years. These observations are supported by other studies^{13,14} and goes further to buttress the fact that that there is usually a transition from the precancerous precursor which is hyperplasia to the malignant variety as the female advances in age. During the perimenopausal period, the ovarian reserves diminish resulting in the occurrence of anovulatory cycles which are associated with unopposed oestrogen production resulting in endometrial hyperplasia of the atypical variety which h as more propensity for malignant transformation.¹⁵This study did not however differentiate between the various types of endometrial hyperplasia.

The observation of malignant adenocarcinoma been more prevalent among the perimenopausal /menopausal age group agrees with the age related incidence observed during epidermiological surveys of endometrial cancer.^{16,17}A review of the distribution of pathologies also clearly identified that any form of postmenopausal bleeding of endometrial origin is mostly malignant since all cases of malignancy were observed beyond the average Nigerian menopausal age of 51 years.¹⁸

Interestingly, the only malignancy in the reproductive age group was choriocarcinoma, which was of the gestational variety, and the precursor of choriocarcinoma was also noted in thesameage group of patients. These may give further credence to the fact that there may be a trend of transformation from hydatidiform mole to choriocarcinoma. This malignancy is associated with good prognosis if diagnosed earlier and with the presence of same tumor maker as pregnancy, it is important, in order not to miss any case, that all suspected products of conception should be subjected to histology as had earlier been recommended by Nyengidiki et al¹⁹ to improve prognosis and improve surveillance of patients at risk.

Endometrial polyps which are localized hyperplastic aggregation of both endometrium and stroma had been observed in about 25% of infertile patients.²⁰ The presence of this pathology among the reproductive age group was also observed in this study, it may be inferred that in the presence of this, the affected patients apart from having abnormal uterine bleeding may also befacing issues with infertility. These observation is however at variance to that of Dreiser et al²¹ who observed occurrence with increasing age and been more in asymptomatic patients.

This study is limited by the fact that is a retrospective study and had the potential of missing data, which was however overcome by the excellent record keeping of the Anatomical department of the hospital. The hospital based nature of the study may not be representative of the general population hence community based studies are advocated.

CONCLUSION

In conclusion, the age related distribution of the pathologies causing abnormal uterine bleeding is evident in this study. Clinicians should have a high index of suspicion to do a basic pregnancy test in women in the reproductive age group, who present to them with abnormal uterine to exclude a pregnancy before venturing into more invasive procedures and consider malignancy in peri-menopausal/menopausal women with abnormal uterine bleeding. Conflict of interest: Nil

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