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HISTOPATHOLOGICAL STUDY OF ENDOMETRIAL CURETTINGS IN ABNORMAL UTERINE BLEEDING : A HOSPITAL BASED STUDY FROM A TERTIARY CARE CENTRE FROM NORTH INDIA.

Pathology

Dr. Navjot Kaur (MBBS, MD), Department of Pathology, Dr YSPGMC, Nahan (H.P.)

Dr. Jagjit S. Chahal* (MBBS,MD), Department of Biochemistry, IGMC, Shimla (H.P.) *Corresponding Author

Dr. Sunil Raina (MBBS, MD), Department of Community Medicine, Dr RPGMC Tanda (H.P.)

ABSTRACT

INTRODUCTION: The etiology of menstrual dysfunction is quite varied. Therefore histopathology of endometrial samples plays a significant role in arriving at the etiological basis of menstrual dysfunction. This study was carried out to determine the histopathological pattern of the endometrium in women of various age groups presenting with abnormal uterine bleeding (AUB).

METHODOLOGY: The current study was conducted on 100 patients attending the Department of Obstetrics and Gynaecology of a tertiary care hospital in north India with a clinical diagnosis of AUB and undergoing dilatation and curettage (D&C) for the same. A histopathological examination of the products of D&C was performed.

RESULTS: The chief pattern of AUB was menorrhagia (48%), followed by amenorrhea and postmenopausal bleeding (14% each), menometrorrhagia (13%), metrorrhagia (8%), polymenorrhea (2%) and oligomenorrhea (1%). Maximum cases (88%) were in the age-group of 21-50 years. The histopathological patterns in this age group mainly included normal proliferative (20%), secretory (16%) and hyperplasia (19%). 13% cases were pregnancy-related viz. products of conception (POC) or H. mole. The commonest histopathological patterns seen were those of normal proliferative and secretory endometrium as well as endometrial hyperplasia.

CONCLUSION: Histopathological examination of endometrium is a major diagnostic tool in evaluation of AUB and is therefore, the key to effective therapy and successful management of AUB.

KEYWORDS

Histopathology, endometrial curettings, D&C, AUB.

INTRODUCTION

Menstrual dysfunction is a common cause of referral to the gynaecology clinic, and the problem has a considerable impact on the health status and the quality of life of women. The aetiology is varied and the burden on the health care system continues to grow.[1] Abnormal uterine bleeding (AUB) is characterized by bleeding at abnormal or unexpected times or by excessive flow at the time of an expected menses. It may be categorized into two broad classifications: that due to organic causes and that caused by anovulation or oligo-ovulation, so-called dysfunctional uterine bleeding (DUB).[2] Organic causes of AUB may be subdivided into reproductive tract disease, iatrogenic causes and systemic disease. When an organic cause of AUB cannot be found, then by exclusion, a diagnosis of DUB is assumed. In about 25% of the patients, the AUB is the result of a well defined organic abnormality.[3] Introduced by Recamier in 1843 to "scrape off uterine fungosities" dilatation and curettage (D&C) has for long been considered the 'gold standard' in the diagnosis of endometrial pathology.[4]

MATERIAL AND METHODS

The present study was conducted on 100 patients attending the Department of Obstetrics and Gynaecology of a tertiary care hospital in north India with a clinical diagnosis of AUB. After obtaining a detailed clinical history, the patients went through a physical examination and all relevant investigations were carried out. Before the procedure (D&C), the study and its technique were explained to the patient in her own language and a written consent was taken. The curettings obtained were fixed in 10% formalin and sent to the department of Pathology where they were first examined grossly. They were then processed in tissue processor, paraffin blocks were made and tissue sections were cut and then stained with routine haematoxylin and eosin (H&E) stain. After mounting and labeling, microscopic examination of the slides was carried out to define histopathological diagnosis.

RESULTS

The chief pattern of AUB was menorrhagia (48%), followed by amenorrhea and postmenopausal bleeding (14% each), menometrorrhagia (13%), metrorrhagia (8%), polymenorrhea (2%) and oligomenorrhea (1%) [Table 1].

Table 1: Distribution according to the patterns of AUB

Patterns of AUB	No. of cases	Percentage
Amenorrhea	14	14%
Menometrorrhagia	13	13%
Menorrhagia	48	48%
Metrorrhagia	8	8%
Oligomenorrhea	1	1%
Polymenorrhea	2	2%
Postmenopausal bleeding	14	14%
Total	100	100%

Age of the patients ranged from 19-70 years. The maximum number (39%) was seen in the fourth decade followed by fifth decade (29%), third decade (20%), sixth decade (7%) and seventh decade (4%). Thus, most of the patients of the study (68%) were between the age group of 31-50 years. There was no case in the first decade while only one case was seen in the second decade (Mean age = 38.96 ± 10.6 years) [Table 2].

Table 2: Age-wise distribution of 100 cases of AUB in the present study

Age group (in years)	No. of cases	%age
11-20	1	1%
21-30	20	20%
31-40	39	39%
41-50	29	29%
51-60	7	7%
61-70	4	4%
Total	100	100%

The histopathological patterns mainly included normal proliferative (20%) and secretory (17%) endometrium as well as endometrial hyperplasia (21%) [Table 3].

Table 3: Age-wise distribution of various histopathological lesions in 100 cases

Diagnosis on	Age groups						
D&C (n = 100)	11-20	21-30	31-40	41-50	51-60	61-70	Total
Proliferative	0	8	10	2	0	0	20
Secretory	0	5	8	3	0	1	17
Irregular (mixed)	0	2	3	1	0	0	6
Atrophic	0	0	0	5	1	0	6
Atrophic with endometritis	0	0	0	0	2	0	2
Hyperplasia	0	0	9	10	1	1	21
Malignancy (Adenocarcinoma)	0	0	0	5	2	2	9

POC	0	3	5	1	0	0	9
H. mole	1	2	1	0	0	0	4
ASR with decidual change	0	0	0	1	0	0	1
Inadequate	0	0	3	1	1	0	5
Total	1	20	39	29	7	4	100

Further, maximum cases of proliferative i.e. 18 out of a total of 20 cases, secretory i.e. 13 out of a total of 17 cases and irregular or mixed endometrium i.e. 5 out of a total of 6 cases belonged to the reproductive age-group i.e. 21-40 years. Most of the cases of endometrial hyperplasia i.e. 19 out of a total of 21 cases belonged to the 4th and 5th decades. 13% cases were pregnancy-related viz. products of conception (POC) or H. mole. [Figure 1]

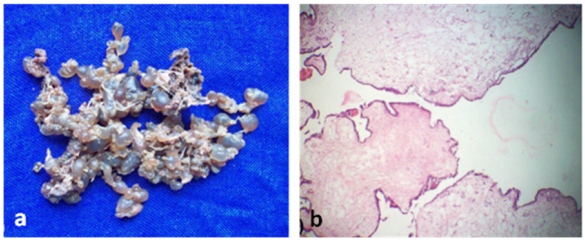

Figure 1. a) Grape like vesicles seen in H. mole (gross); b) H. mole showing villi with hydropic degeneration on histopathology (H&Ex 40)

11% cases were above 50 years which mostly included atrophic endometrium, endometrial hyperplasia and malignancy. There were 9 cases of malignancy [Figure 2] out of which 4 cases were above 50 years of age while 5 cases were in the fifth decade, hence peri- or post-menopausal age-group. Similarly cases having atrophic endometrium (8%) were also between 41- 60 years.

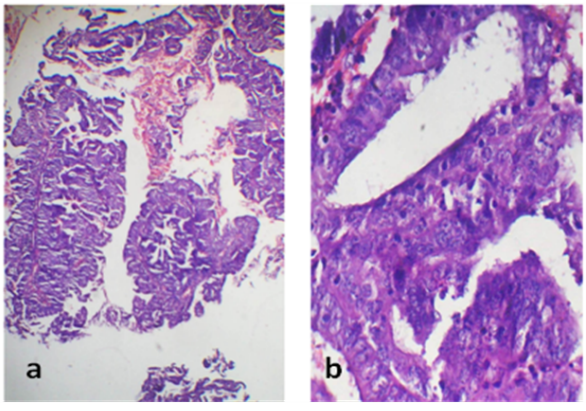

Figure 2. Endometrial carcinoma (Adenocarcinoma): Malignant cells showing pleomorphism, hyperchromatic nuclei with prominent nucleoli; a) Papillary pattern is appreciable (H&E x 100), b) Numerous mitotic figures and prominent nucleoli (H&Ex400)

DISCUSSION

The present study was conducted on 100 patients of AUB. In the present study, age ranged from 19-70 years with a Mean age = 38.96 ± 10.6 years. It was comparable to the mean age (44 years) of 51 patients selected for the study by Liza *et al*. in which the age-range was 39-70 years.[5] A similar study was carried out by Vaidya *et al*. in which the age of the patients ranged from 18 to 70 years which was comparable to our study.[6]

In the present study, maximum cases (39%) belonged to 4th decade which can be compared with 42.20% in the same decade in the study by Maheshwari *et al*. This was followed by an incidence of 29%, 20% and 7% in the 5th, 3rd and 6th decades respectively in the present study [Table 2] and in a similar fashion, the percentage in these decades was 25.9%, 16.3% and 8.8% respectively in the study by Maheshwari *et al*.[7]

The most common clinical presentation was represented by menorrhagia (46.4%) in a study by Jetley *et al*.[8] In our study also, the chief pattern was menorrhagia (48%). [Table 1]

So far as the relation between endometrial pattern and its age-wise distribution is concerned, maximum number of cases with normal endometrium (proliferative/ secretory) were in the range of 21-50 years in the present study as well as in the study of Mehrotra *et al*.[9] For malignancy, the age-range was in the later decades of life viz. 40-81 years in the study of Lidor *et al*.[10] and 41-70 years in the present study. Similarly for atrophic endometrium, the age was beyond 41 years in the present study as well as in the study of Mehrotra *et al*. So far as hyperplasias were concerned, age-range observed by Mehrotra *et al*.[9] was 21-50 years while the same in the present study was a decade or two later (31-70 years). [Table 3]

Histopathological examination of endometrial curettings in patients presenting with AUB showed a wide spectrum of changes ranging from normal endometrium to malignancy. It is a major diagnostic tool in evaluation of AUB and is therefore, the key to effective therapy and successful management of AUB. Above all, endometrial evaluation plays an important role in perimenopausal and postmenopausal women presenting with AUB in the timely diagnosis of any preneoplastic condition or malignancy.

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