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Original Research Article.

A Histopathological Study of Endometrium in Abnormal Uterine Bleeding

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ABSTRACT

Background: Abnormal uterine bleeding is one of the commonest conditions for which patients seek medical care. It is estimated that 9-30% of women of reproductive age suffer from menorrhagia. The prevalence increases with age, peaking just prior to menopause. The aim of this study to evaluated the endometrial histopathological causes of abnormal uterine bleeding.

Materials & Methods: The hospital based descriptive type of observational study conducted at Zanana Hospital, Gangori Hospital & Mahila Hospital, Jaipur under the Department of Pathology at SMS Medical College and Hospital Jaipur during 1stjanuary 2013 to December 2014. The study material consisted of endometrial curettings from 300 patients attending Gynecology OPD. These patients were having a clinical diagnosis of abnormal uterine bleeding.

Results: The present study showed the maximum incidence were seen in the age group of 36-40 (27.66%), minimum incidence was in the age group of 17-20 (01%) and complaint of menorrhagia (48.66%) followed by metrorrhagia (26.33%). Different histopathological types of endometrial patterns were studied, proliferative type of endometrium was in 123 cases (41%) followed by secretory type of endometrium in 96 cases (32%).

Conclusion: We concluded that Study of endometrial microscopy in women with AUB is helpful to distinguish anovulatory from ovulatory AUB and to diagnose hyperplasia and carcinoma of endometrium.

Keywords: Abnormal Uterine Bleeding, Endometrium, Menorrhagia, Metrorrhagia.

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INTRODUCTION

Woman today experience more menstrual cycles than her ancestors did. This is mainly due to decreased parity and reduction in lactational amenorrhea. Abnormal uterine bleeding is sometimes so morbid that she needs time off from her regular work.[1]

Abnormal uterine bleeding is one of the commonest conditions for which patients seek medical care. It is estimated that 9-30% of women of reproductive age suffer from menorrhagia. The prevalence increases with age, peaking just prior to menopause. Most cases are associated with anovulatory menstrual cycles. Adolescent and peri-menopausal women are particularly vulnerable. About 20% of affected individuals are in the adolescent age group and 50% of affected individuals are aged between 40-50 years.[2] Now a days medical advancements combined with increasing awareness about gynaecological problems, women gain access to most of the diagnostic and therapeutic modalities. The endometrial biopsy is chosen to evaluate abnormal uterine bleeding because it has several advantages over other diagnostic methods. The hormonal assay is very expensive and laboratories with hormonal assay are not available in rural areas.[3]

Ultrasonography as a diagnostic tool has limited value in abnormal uterine bleeding, except in atrophy and hyperplasia. Other investigations like hysteroscopy and hysterosalpingography are mainly helpful in diagnosing organic pathology. Endometrial curettage is relatively inexpensive and accurate as an office procedure. Hormonal assay must be correlated with the histomorphological studies of endometrium. The only disadvantage of endometrial biopsy is that, it is an invasive procedure.[4] The aim of this study to evaluated the endometrial histopathological causes of abnormal uterine bleeding.

MATERIALS & METHODS

The hospital based descriptive type of observational study conducted at Zanana Hospital, Gangori Hospital & Mahila Hospital, Jaipur under the Department of Pathology at SMS Medical College and Hospital Jaipur during January 2013 to December 2014.

Exclusion Criteria

Abnormal uterine bleeding cases suffering from leiomyoma, cervical & vaginal causes and Hemostatic disorders.

The study material consisted of endometrial curettings from 300 patients attending Gynecology OPD during a period of 2 years between January 2013 and December 2014. These patients were having a clinical diagnosis of abnormal uterine bleeding.

Endometrial curettage samples were fixed in 10% formalin and histopathological slides were prepared and Hematoxyline and Eosin staining was done.

Biopsy

Histopathological examination of the available biopsies was done for the study. The biopsy specimens were fixed in 10% formalin for 24 hours and then grossed and findings were noted. Paraffin embedded tissues were blocked in paraffin with the help of moulds. 4-6 µ thick sections were cut, these slides were kept in hot oven at 66^0C for one hour to fix the section on slides and H&E staining was done.

RESULTS

The present study showed the maximum incidence were seen in the age group of 36-40 (27.66%), minimum incidence was in the age group of 17-20 (01%) (Table 1) and complaint of menorrhagia (48.66%) followed by metrorrhagia (26.33%). (Table 2)

Different histopathological types of endometrial patterns were studied, proliferative type of endometrium was in 123 cases (41%) followed by secretory type of endometrium in 96 cases (32%). (Table 3)

Cases of AUB which presented with the complains of Menorrhagia, there were 146 cases, out of which, 54 cases (17.66%) of proliferative phase followed by 53 cases (17.33%) of secretory phase. (Table 4) and complains of Metrorrhagia mostly proliferative phase followed by secretory phase. (Table 5)

Table 1: Distribution of 300 AUB cases according to various age groups

Age group	No. of Cases	Percentage
<20	3	1.0
21-25	13	4.33
26-30	33	11.0
31-35	42	14.0
36-40	83	27.66
41-45	66	22.0
46-50	45	15.0
>50	15	5.0
Total	300	100

Table 2: Bleeding pattern in AUB patients.

Types of Bleeding	Cases (n)	Percentage
Menorrhagia	146.0	48.66
Metrorrhagia	79.0	26.33
Menometrorrhagia	61.0	20.33
Polymenorrhoea	9.0	03.0
Oligomenorrhoea	2.0	0.66
Post-menopausal bleeding	3.0	1.0
Total	300	100

Table 3: Types of endometrial pattern in our study

Type of Endometrium	No. of cases	Percentage
Proliferative phase	123	41
Secretory phase	96	32
Cystoglandular Hyperplasia	3	1.0
Simple Hyperplasia	24	8.0
Endometritis	3	1.0
Pill endometrium	2	0.66
Mixed phase	3	1.0
Menstrual phase	29	9.33
Adenocarcinoma	2	0.66
Atrophic	1	0.33
Reg. Atypia	1	0.33
Polyp	1	0.33
Unsatisfactory	12	4.0
Total	300	100

Table 4: Correlation of menorrhagia in relation to endometrial pattern

Type of Endometrium	No. of cases	Percentage
Proliferative Endometrium	54	17.66
Secretory Endometrium	53	17.33
Cystoglandular Hyperplasia	2	0.66
Simple Hyperplasia	16	5.33
Endometrial polyp	1	0.33
Pill Endometrium	1	0.33
Reg. Atypia	1	0.33
Endometritis	1	0.33
Menstrual phase	8	2.66
Adenocarcinoma	2	0.66
Unsatisfactory	6	2.0
Mixed phase	1	0.33
Total	146	48.66

Table 5: Correlation of metrorrhagia in relation to endometrial pattern

Type of Endometrium	No. of cases	Percentage
Proliferative Endometrium	35	11.66
Secretory endometrium	19	6.33
Cystoglandular Hyperplasia	1	0.33
Simple Hyperplasia	6	2.0
Menstrual phase	10	3.33
Atrophy	1	0.33
Pill Endometrium	1	0.33
Unsatisfactory	6	2.0
Total	79	26.33

DISCUSSION

Abnormal uterine bleeding continues to be one of the most frequently encountered and perplexing problems in Gynaecological practice. It may present at any age between puberty and menopause and it may occur with any type of endometrium.

Age distribution of these cases revealed maximum in 4th decade and minimum in 2nd decade. Incidence of abnormal uterine bleeding was highest in multiparous women and minimum in nullipara. Similarly maximum incidence with complaint of menorrhagia (48.66%) followed by metrorrhagia. The age of the patient with A.U.B. has been taken as a criterion for study in attempt to establish incidence of A.U.B. in various age groups. Earlier it was believed that dysfunctional uterine bleeding occurs more frequently at either ends of the child bearing period. Similar findings suggest with Sutherland (1962)[5], Naheed (1997)[6], Ayesha (2005)[7], Sadia khan (2011)[8], Vaidya (2013)[9] and Vijay kumar (2014)[10] have reported highest incidence in age group of 41-50 years. Similarly Anusuya Das (1964)[11], reported the maximum incidence of 36.2% in the 5th decade. A few worker Kanakadurgamba et al (1964)[12] reported 44%. Naheed (1997)[6] reported 12.6%, Ayesha (2005)[7] reported 15.5% Rajesh (2013)[13] reported 20.53% and Vijai kumar (2014)[10] reported 16.82% in the age group between 21-30 years. Das A. and Chugh (1964)[11], Bhattacharji (1964)[14], Rajesh (2013)[13], Abid M (2014)[1] and Supriya et al (2014)[15] have reported highest incidence in 31-40 years of age. In the present Study, high incidence of AUB was noted in 31-40 years, it was 42% which is found to be similar to many of the above observations.

In the present study incidence of menorrhagia was 48.66% metrorrhagia was 26.33% polymenorrhagia was 03%, oligomenorrhoea was 0.66%, menometrorragia was 20.33% and post menopausal bleeding was 01%. In Naheed Moghal[6] series the incidence of menorrhagia was 40.83%, metrorrhagia was 48.04%, menometrorrhagia was 2.84%, polymenorrhoea 1.74%, and postmenopausal bleeding was 6.55%. Sadia khan (2011)[8], Rajesh (2013)[13] and Vijay kumar (2014)[10] reported menorrhagia 57.8%, 73.16%,47.72% respectively which was highest incidence. In the present study the highest incidence of menorrhagia 48.66% was seen. Naheed (1997)[6], Sadia Khan (2011)[8], Vaidya (2013)[9], Rajesh (2013)[13] and Supriya (2014)[15] reported maximum case of proliferative phase in AUB patients.

Naheed (1997)[6] reported 25.33% cases, Sadia khan (2011)[8] reported 38.4% cases, Vaidya (2013)[9] reported 23.82% cases and Supriya (2014)[15] 23.6% cases of secretory phase in AUB patients. Sadia khan (2011)[8] reported 01% cases and Supriya (2014)[15] reported 1.1% cases of atrophic endometrium. In present study proliferative phase was reported in 41% cases, secretory phase in 32% cases, pill endometrium in 0.33% cases and atrophic endometrium in 0.66% cases are reported.

CONCLUSION

We concluded that Study of endometrial microscopy in women with AUB is helpful to distinguish anovulatory from ovulatory AUB and to diagnose hyperplasia and carcinoma of endometrium.

Therefore conclusion is that dilatation and curettage is useful for diagnosis, to assess therapeutic response and to know the pathological incidence of organic lesions in cases of abnormal uterine bleeding prior to surgery.

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