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STUDY OF ENDOMETRIAL PATHOLOGY IN DYSFUNCTIONAL UTERINE BLEEDING

Dr. Sandhya Jilhekar* & Dr. Varsha Patil**
* Assistant Professor OBGY, Grant Medical College, Mumbai, Maharashtra
** Associate Professor OBGY, Grant Medical College, Mumbai, Maharashtra

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Abstract:

Dysfunctional uterine bleeding (DUB) is defined as excessively heavy, prolonged, or frequent bleeding of uterine origin that is not due to pregnancy or any recognizable pelvic or systemic cause. Diagnostic dilatation curettage is the gold standard method for detecting an endometrial abnormality in DUB and should be done to exclude hyperplasia and malignancy in all cases of DUB in perimenopausal age. The present study aimed to know the full spectrum of DUB and its pathological aspects.

Objective: The objectives of this study are

- ✓ To study endometrial cytomorphology in cases of DUB.
- ✓ To correlate age and parity with the histopathological finding.
- ✓ To study the incidence of various hyperplasia in women with DUB.

Material and Methods: A prospective study of 50 cases of DUB undergone dilatation and curettage, and endometrium sample were evaluated.

Results: In endometrial study of 50 cases of DUB, 28% were endometrial hyperplasias, 24% with proliferative endometrium, 10% with early secretory endometrium, 6% with late secretory endometrium, 18% with disordered proliferative endometrium, 6% with endometrial polyp, 4% had cystic glandular hyperplasia, 2% had proliferative endometrium with cystic changes, and 2% had acute on chronic endometritis.

Conclusion: Diagnostic dilatation and curettage (D&C) is the gold standard method of sampling of endometrial tissue in perimenopausal age to rule out malignancy.

Key Words: Abnormal Uterine Bleeding, Menorrhagia & Perimenopause.

Introduction:

Dysfunctional uterine bleeding (DUB) is defined as excessively heavy, prolonged, or frequent bleeding of uterine origin that is not due to pregnancy or any recognizable pelvic or systemic cause. It is a common problem in the women in the age 30-50 years. Dysfunctional uterine bleeding is synonymous with anovulatory bleeding, in the absence of pregnancy or any demonstrable pathology[1]. Variations in menstrual flow & cycle length are common at the extremes of reproductive age. It usually affects 5% of menstruating women[2]. Anovulatory cycles are the most common cause of DUB of the women of reproductive age. The pathophysiology of DUB is not fully understood and it is complex. DUB associated with ovulatory bleeding is poorly understood. However, disordered prostaglandin metabolism and increased lysosomal activity in the endometrial cells explain most cases of ovulatory DUB. In a large proportion of women, the basic disorder may be a pituitary overproduction of Prolactin, which in excess suppresses progesterone production. Rarely, endometrium lacks progesterone receptors[3]. An endometrial biopsy should be performed on all women over 35 years with menorrhagia to rule out endometrial cancer or pre-malignant lesion. Adenocarcinoma of the endometrium is often preceded by proliferative precursor lesions "endometrial hyperplasia". Thus, early accurate diagnosis and proper treatment of endometrial hyperplastic lesions are essential to prevent progress to endometrial cancer and preclude unwarranted hysterectomy without a definitive diagnosis.[4] In 2001, the Stages of Reproductive Aging Workshop (STRAW) defined 'perimenopause' as the period beginning with menopausal transition and ending 12 months after the last menstrual period.[5,6]. The exposure of endometrium to continuous estrogen unopposed by progesterone can lead to endometrial hyperplasia which is a premalignant condition of the uterus. There are three types of endometrial hyperplasia. The simple hyperplasia is the most common type which isn't associated with endometrial carcinoma and progression to endometrial cancer is only 0.4%.[7] Diagnostic dilatation curettage is the gold standard method for detecting an endometrial abnormality in DUB and should be done to exclude hyperplasia and malignancy in all cases of DUB in perimenopausal age. The present study aimed to know the full spectrum of DUB and its pathological aspects.

Materials and Methods:

The study was conducted in the tertiary institute at Departments of Obstetrics and Gynecology for one year from 1st January 2016 to 31st December 2016. A total number of 50 cases of DUB in the age group of 25-60 years were selected. In the study group, a thorough history, clinical examination, ultrasonography evaluation of uterus, complete hematological profile including platelet count and thyroid profile were carried out. For

excessive bleeding emergency D & C done while other patients underwent elective EUA, Hysteroscopic D & C under SGA. For elective cases, endometrial biopsies were performed between 21st and 24th day of the menstrual cycle. The endometrial sample was collected in formalin solution and sent for histopathological study. Patients were divided as the nonorganic and organic cause. Non-organic like Secretory endometrium, proliferative and disordered proliferative endometrium while organic causes are polyp, endometritis, and hyperplasia.

Inclusion Criteria - All clinically diagnosed cases of DUB.

Exclusion Criteria - Structural lesions diagnosed radiologically like fibroid uterus, Adenomyosis and Malignant cases.

Results:

In this study, out of total 50 cases, 10% belonged to age group 20-30yr, 40% belong to 31-40yr, 44% belong to 41-50yr & 6% belong to >50yr age group.(Table 1) Thus the maximum number of patient belong to perimenopausal age group.2% Patient were nulliparous, while 46% belong to parity 1-2 & remaining 52% were of more than para 3.(Table 2). Out of 50 patients 4% were previous 1 LSCS, 2% with previous 2 LSCS & 4% were previous 3 LSCS. 6% patients were diagnosed hypothyroidism after investigation and started them on Thyronorm as per medical advice. 10%(5) patients in this study were hypertensive. Out of 50 cases, as shown in Table 3, polymenorrhea was in 16%, polymenorrhagia in 6%cases, menorrhagia in 52% cases, dysmenorrhagia in 4% cases, bleeding PV on & off at irregular interval in 18% cases, oligomenorrhea in 2% cases, and postmenopausal bleeding PV found in 2% cases. Thus most common symptoms for which patients visited the hospital were menorrhagia in 52% cases.Emergency dilatation and curettage were done in 30 cases while in 20 cases elective hysteroscopic dilatation and curettage were done. In endometrial study, 28%were endometrial hyperplasias, 24% with proliferative endometrium, 10% with early secretory endometrium, 6% with late secretory endometrium, 18% with disordered proliferative endometrium, 6% with endometrial polyp, 4% had cystic glandular hyperplasia, 2% had proliferative endometrium with cystic changes, and 2% had acute on chronic endometritis.(Table 4)

1. Age:

Age (Yrs)	No.	%
20-30	5	10
31-40	20	40
41-50	22	44
>50	3	6
Total	50	100

2. Parity:

Parity	No.	%
Nulligravida	1	2
1-2	23	46
>3	26	52
Total	50	100

3. Incidence of Menstrual Disorder in Dub:

Menstrual Disorder	No. of Cases	%
Polymenorrhea	8	16
Polymenorrhagia	3	6
Menorrhagia	26	52
Dysmenorrhagia	2	4
BLPV on & Off(Irregular)	9	18
Oligomenorrhea	1	2
Postmenopausal BLPV	1	2
Total	50	100

4. Histopathology:

Histopathology of Endometrium	No. of cases (%)	Age 20-40	Age 41-60	Total No. %
Simple Endometrial Hyperplasia	14(28%)	3	11	28%
Proliferative endometrium	12(24%)	4	8	24%
Proliferative endometrium with cystic changes	1(2%)	1	0	2%
Early Secretory Endometrium	5(10%)	2	3	10%
Late Secretory Endometrium	3(6%)	2	1	6%
Cystic Glandular Hyperplasia	2(4%)	2	0	4%
Disordered proliferative endometrium	9(18%)	4	5	18%
Endometrial Polyp with Secretory Phase	3(6%)	2	1	6%

Acute on Chronic endometritis	1(2%)	0	1	2%
Total	50	20	30	100

Discussion:

DUB is one of the commonest conditions for which patient seek medical consultation. The prevalence increase with the increasing age peaking prior to menopause. The perimenopausal women have anovulatory cycle leading to DUB. We can see that DUB is maximum in the age group 41-50 years i.e.45%.Thus DUB is more common in perimenopausal age than in reproductive age, similar to S Kayastha[8] study and study were done by Sutherland (1950)[9].Again the incidence of DUB increase with the increase of parity, as 52% patients were of parity more than 3, same like S Kayastha[8] study, Mehrotra et al[10] study. In our study, it was found that in more than half of the patients with menorrhagia, no obvious abnormality was detected on examination and routine investigation as in a retrospective study of 117 menorrhagia patients by Mazhar[11], Shazia Riaz[12] study, and Sajitha K[13],

As regard to histopathology report, 28% were hyperplasia and 60% were normal endometrium with proliferative phase or secretory phase, 6% patients had an endometrial polyp and 2% had acute on chronic endometritis, 4% had cystic glandular hyperplasia. Exposure of endometrium to continuous estrogen unopposed by progesterone can lead to endometrial hyperplasia. Endometrial hyperplasia was the most common histological pattern observed in our study 28% cases similar to study Sajitha K[13]. In our cases of hyperplasia, only simple typical hyperplasia was noted. Endometrial hyperplasia is a precursor of endometrial cancer. The Incidence of simple hyperplasia was similar to study by S Kayastha , by Punitpong (2002) study[14]and Sarwar et al[15].There was no endometrial carcinoma in our study. Maximum of the patient with simple hyperplasia had heavy bleeding, similar to S Kayastha study. All 10% hypertensive patients had simple hyperplastic endometrium. Takrim et al (2009)[16] also found that hypertension was common (20%) in cases of hyperplasia. Also in all 6% hypothyroid patients, hyperplasia of the endometrium was noted. Endometrial hyperplasia mostly found in perimenopausal women (22%).In the present study, the maximum incidence of endometrial hyperplasia was noted in the 41-60year age group and was seen in 11 of 14 patients. This was consistent with the findings in other studies like Sajitha K. [13]In the present study, a proliferative pattern of endometrium [was observed in 24% patients, similar to Sajitha K[13]This pattern was commonly observed in the late reproductive and perimenopausal women in our study and other studies and may be due to the hormonal imbalance in this group leading to intermittent anovulatory cycles. Disordered proliferative endometrium is an exaggeration of the normal proliferative phase without significant increase in the overall ratio of glands to stroma and is due to persistent estrogen stimulation and was found in 18% cases, similar incidence found into Sajitha K Saadia A[17]Secretory endometrium was the third most common pattern observed in this study and was seen in 16.% patients. A similar incidence of secretory pattern (16.6%) was noted in another study like Sajitha K, Bhosle A[18]. The incidence of endometrial polyps in our study is 6% similar to Dr. Junu Devi[19] study where incidence was 9.65%.Endometritis was found in 2% of cases. It is almost similar to the study done by other author like Dr. Junu Devi[19] where incidence was 5.26%.

Conclusion:

DUB is more common in perimenopausal age and multiparity. Diagnostic dilation and curettage (D&C) is the gold standard method of sampling of endometrial tissue. Commonest normal histopathology in our study is proliferative endometrium. Patients with a risk factor of hypertension and hypothyroidism were at risk of the hyperplastic endometrium and hence proper evaluation is necessary. Thus endometrial study is mandatory to exclude premalignant and malignant condition of endometrium if one or more risk factor is present in cases of DUB. It gives bright avenues not only to find out cases in which organic lesions like polyps ,hyperplasia can be detected but also helps to search out early atypical hyperplasia and cancer of endometrium which has excellent prognosis if detected early.

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