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Original Research Paper

Pathology

HISTOPATHOLOGICAL STUDY OF DILATATION AND CURETTAGE (D&C) MATERIAL AT TERTIARY CARE HOSPITAL, AHMEDABAD

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ABSTRACT

Introduction: Dysfunctional uterine bleeding is one of the most frequently coming across conditions, among women who are in their reproductive age. Many authors have studied the pathology of endometrium in DUB, but even after strenuous efforts, the dilemma is yet to be resolved. **Aims And Objectives:** To study the histopathological changes of the endometrium in dysfunctional uterine bleeding and to correlate them with age, parity and bleeding pattern. **Materials And Methods:** It is a retrospective study which included 150 patients who were clinically diagnosed as Dysfunctional Uterine Bleeding during the period September 2017 to September 2023 at Dr. M.K. Shah Medical College and Research Centre, Chandkheda, Ahmedabad. Detailed clinical findings were noted. D & C specimen was sent to Department of Pathology, Dr. M.K. Shah Medical College and Research Centre, Chandkheda for HPE. **Results And Observations:** The maximum incidence was in the age group 21-30 (n=68) followed by 31- 40 years (n=39). Among all the age groups product of conception was the most common endometrial pattern seen in 70 patients followed by Secretory endometrium in 29 patients, Proliferative endometrium in 22 patients, cystic hyperplasia in 20 patients, progesterone effect in 7 patients, endometrial polyp in 2 patients and atrophic changes in 1 patient. **Conclusion:** DUB was a common gynaecological complaint, predominantly seen in the age group 21-30 years. No specific relationship exists between bleeding pattern, age and parity of conception was the commonest type of endometrium observed, followed by secretory type of endometrium. In the other 96% of the patients the clinical findings, clinical diagnosis correlated well with the histopathological diagnosis. Considering all the above observations, DUB is caused due to the product of conception in the endometrium in reproductive age group.

KEYWORDS :

INTRODUCTION:

Bleeding per vagina is considered as a common symptom in gynaecology, because it is associated with different pathological conditions of female genital tract. Dysfunctional uterine bleeding is one of the most frequently coming across conditions, among women who are in their reproductive age. By definition Dysfunctional uterine bleeding is non- organic in origin, and is predominantly encountered with organic ovarian dysfunction, associated or unassociated organic pathology can also co-exist. Many authors have studied the pathology of endometrium in DUB, but even after strenuous efforts, the dilemma is yet to be resolved.

AIMS AND OBJECTIVES:

- To study the histopathological changes of the endometrium in dysfunctional uterine bleeding.
- To correlate the histopathological changes observed in endometrium with age, parity and bleeding pattern in dysfunctional uterine bleeding.
- To evaluate incidence of incidental organic lesions in dysfunctional uterine bleeding.

MATERIALS AND METHODS:

The material for this study included 150 patients (n=150) who were clinically diagnosed as Dysfunctional Uterine Bleeding (DUB) during the period from September 2017 to September 2023 at Dr. M.K. Shah Medical College and Research Centre, Chandkheda, Ahmedabad, India.

All these patients were included under retrospective observational study and majority of them are of reproductive age group. In all 150 patients, detailed clinical history was taken and thorough clinical examination inclusive of general, systemic and gynaecological examination was done. All these 150 patients (n=150) were diagnosed to have Dysfunctional Uterine Bleeding after ruling out other disorders by pelvic examination and investigations.

Endometrial curettage was done in majority of the patients prior to hysterectomy as a therapeutic and /or a diagnostic procedure. The objective was to exclude a surface endometrial lesion and at time served therapeutic purpose as well. Therapeutic curettage was done at the time of bleeding and a diagnostic curettage, premenstrually or on the 5th- 10th day of bleeding. D & C was performed by qualified, experienced Gynaecologists under spinal anaesthesia. The curettage specimen was received by the Department of Pathology, Dr. M.K. Shah Medical College and Research Centre, Chandkheda for histopathological examination.

The specimen was initially fixed in 10% aqueous formaldehyde for a period of 8-12 hours, the tissue was processed for paraffin embedding and 3-5 cm sections were cut and routinely stained with Haematoxylin and Eosin stain. Histopathological appearances were studied under optical compound microscopes by qualified and experienced pathologists. Parameters such as age, parity, clinical findings, Haemoglobin levels and histopathological diagnosis were studied with a higher degree of significance.

RESULTS AND OBSERVATIONS

150 DUB patients were analysed for their relation to age, parity, type of bleeding, pattern of bleeding, clinical presentation, Hb levels, type of endometrium on Histopathology, and presence or absence of incidental organic lesions.

Table 1: Frequency Of Distribution Of DUB Among Different Age Groups

Age in Years	No. of Cases	Percentage
10-20	08	5.33%
21-30	68	45.33%
31-40	39	26%
41-50	26	17.33%
51-60	08	5.33%
61-70	01	0.66%

The above table (table 1) shows age distribution of DUB. The youngest patient was 19 years old and the oldest was 62 years old. The maximum incidence of DUB was in the age group 21-

30 (n=68 45.33%) followed by 31- 40 years (n=39, 26%). Minimum incidence was recorded in the age group of 61-70 years.

Table 2: Endometrial Pattern Related To Age Group

Endometrial pattern	</= 20 years	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	65-70	TOTAL
Proliferative Phase	02	02	02	01	04	03	05	03	-	-	-	20
Secretory Phase	02	06	06	03	06	02	04	-	-	-	-	29
Cystic Hyperplasia	-	-	02	01	03	07	03	03	-	-	-	19
Product of Conception	04	19	26	11	07	01	-	02	-	-	-	70
Progesterone Effect	-	01	03	-	02	01	-	-	-	-	-	07
Endometrial Polyp	-	01	-	01	-	-	-	-	-	-	-	02
Atrophic	-	-	-	-	-	-	-	-	-	01	-	01
TOTAL	08	29	39	17	22	14	12	08	-	01	-	150

In the age group of < 20 years, only 2 patients showed proliferative phase, 2 patient showed secretory phase, 4 patients showed product of conception. In the age group of 21-25 years, 2 patients showed proliferative phase, 6 patients showed secretory phase and 19 patients showed product of conception,1 patient showed progesterone effect and 1 patient showed endometrial polyp. In the age group of 26-30 years, only 2 patients had cystic hyperplasia, 2 patients showed proliferative endometrium, 6 patients showed secretory endometrium, 26 patients showed product of conception and 3 patients showed progesterone effect. In the age group of 31-35 years, only 1 patient showed cystic hyperplasia, 1 patient showed proliferative endometrium, 3 patients showed secretory phase,11 patients showed product of conception and 1 patient showed endometrial polyp. In the age group of 36-40 years, 3 patients showed cystic hyperplasia ,4 patients had proliferative endometrium, 6 patients showed secretory phase, 7 patients showed product of conception, 2 patients showed progesterone effect. In the age group between 41-45 years, 7 patients showed Cystic hyperplasia, proliferative endometrium was seen in 3 patients, secretory phase in 2 patients, product of conception seen in 1 patient and progesterone effect in 1 patient. In the age group of 46-50 years, 3 patients had cystic hyperplasia, 5 had proliferative endometrium, 4 patients had secretory pattern. In the age group of 51- 55 years, 3 patients had cystic hyperplasia, 3 patients had proliferative endometrium and 2 patients showed product of conception. In the age group of 56-60 years no patients were seen. In the age group of 61-65years,1 patient showed atrophic changes and in the age group of 65-70 years, no patients were seen.

Table 3: Endometrial Pattern In 150 DUB Patients

Endometrial Pattern	Total	Percentage
PROLIFERATIVE PHASE	22	14.6
SECRETORY PHASE	29	19.3
CYSTIC HYPERPLASIA	20	13.3
PRODUCT OFCONCEPTION	70	46.6
PROGESTERONE EFFECT	07	4.7
ATROPHIC	01	0.6
ENDOMETRIAL POLYP	02	1.3

Among all the age groups, product of conception was the most common endometrial pattern seen in 70 patients (n=70, 46.6%), followed by Secretory endometrium in 29 patients (n=29, 19.3%), Proliferative endometrium in 22 patients (n=22,14.6%), cystic hyperplasia in 20 patients (n=20, 13.3 %), progesterone effect in 7 patients (n=7, 4.7%), endometrial polyp in 2 patients (n=2, 1.3%) and atrophic changes in 1 patient (n=1,0.6%).

DISCUSSION

Dysfunctional uterine bleeding is a very routinely faced condition in gynaecological practice. The most common aetiology of patients who undergo hysterectomy is DUB. DUB may present at any age between puberty and menopause and may occur with any type of endometrium. Anovulation was most common at two extremes of menstrual life i.e. menarche and menopause. Sutherland [1] Anasuya [2] and Gosh [3] reported the maximum incidence of 36.2%, 32.5% and 46% respectively in the 5th decade of life. But Wagh [4] and Mehrotra [5] found incidence highest in 21-30 years age group (30% and 48% respectively) which was supported by the findings of AVK Nirmala [6] (37.46%). Gautam *et al.; [7] fou* 15-20 years. In the present study, the maximum number of cases Were recorded in the age group of 31-40 years (n=55, 36.7%). Joshi *et al.;*[8] observed 16.82% of patients with secretory endometrium. The incidence of secretory endometrium in the present study is 21.2%. Kanakadurgamba [9] found lower incidence of 4%. Uterine bleeding may occur in atrophic endometrium also. In the present study one patient showed atrophic endometrium while Sutherland (1) report atrophic endometrium in 1%. Most of the authors found no histological abnormality in more than 50% of cases. Kanakadurgamba [9] found normal endometrium in 30%. In the present study normal endometrium was found in 37% cases (15.8% proliferative and 21.2% secretory endometrium). It is noted that in the majority of studies, the incidence of endometrial hyperplasia ranged from 19.4% to 31.25%. A few studies showed higher incidence of 55-68%.

CONCLUSION

DUB was a common gynaecological complaint, predominantly seen in the age group 21-30 years. No specific relationship exists between bleeding pattern, age and parity of conception was the commonest type of endometrium observed, followed by secretory type of endometrium. Proliferative and secretory endometrium were commonly seen in the age group of 41-45 years and 21- 25 years respectively. Cystic hyperplasia of the endometrium was seen in the age group 41- 45 years. In the other 96% of the patients the clinical findings, clinical diagnosis correlated well with the histopathological diagnosis. Considering all the above observations, DUB is caused due to the product of conception in the endometrium in reproductive age group.

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