EVALUATION OF ENDOMETRIAL HISTOPATHOLOGY IN PATIENTS OF ABNORMAL UTERINE BLEEDING IN REPRODUCTIVE AGE GROUP-A HOSPITAL BASED STUDY.

Farah Jalaly Meenai¹, Prajakta Ganesh Joshi²

HOW TO CITE THIS ARTICLE:

ABSTRACT: This study was conducted in a hospital setting to evaluate histopathology of patients with abnormal uterine bleeding. Patients with abnormal uterine bleeding underwent endometrial aspiration. The material obtained was subjected to histopathological examination. The findings were corroborated with gynecological findings. The outcome is discussed in the light of previous studies. It was found that most of the patients belonged to perimenopausal age group. Proliferative endometrium was the commonest histological finding. It is concluded that anovulatory cycles in perimenopausal age may be a major association in cases with dysfunctional uterine bleeding.

KEYWORDS: Metrorrhagia; endometrial hyperplasia; reproductive medicine.

INTRODUCTION: Normal menstrual cycle is exquisitely controlled by the rise and fall of pituitary and ovarian hormones which is executed by proper timing of hormone release in both absolute and relative amounts. Abnormalities in this system result in abnormal uterine bleeding. Normal menstrual cycle duration is 24-38 days. Average flow lasts for 4-6 days. Average loss of blood is 30 ml¹. Blood loss greater than 80 ml is abnormal which results in anemia. Prolonged flow is that which lasts for greater than 8 days². Dysfunctional uterine bleeding (DUB) is a complex symptomatology which includes all conditions of abnormal uterine bleeding in absence of pregnancy, neoplasm, infection, intrauterine lesion³. Acute DUB is defined as an episode of bleeding in a woman of reproductive age who is not pregnant, that in the opinion of the provider is of sufficient quantity to require immediate intervention to prevent further blood loss. Chronic DUB from the uterine corpus i.e. abnormal in duration, volume and or frequency and has been present for the majority of the last 6 months. Endometrial aspiration of is a safe simple and reliable technique without any complications. So we used it as a safe and reliable outpatient procedure with minimal discomfort to the patient⁴.

Various causes of DUB in non-gravid women in reproductive years (PALM COEIN) classification⁵ – Polyp, adenomyosis, leiomyoma, malignancy, and hyperplasia, coagulopathy, ovulatory disorders of endometrium, iatrogenic and not classified. Post-menopausal hyperplasia carries strong threat of cancer than premenopausal hyperplasia. Medical conditions which disrupt normal menstrual pattern are Thyroid disorders, PCOD, hyperprolactinemia, use of metoclopramide or phenothiazine and tricyclic antidepressant, stress, strenuous exercises, obesity, eating disorders, hemorrhagic diathesis like leukemia, AV malformation.

Endometrial sampling – the main objectives are to exclude a local intrauterine lesion such as incomplete abortion, uterine polyp, tuberculous endometritis and carcinoma as a cause of bleeding and to obtain endometrium for study of its hormone responses. The more irregular the bleeding is,
the greater is the indication for endometrial sampling. Curettage is mainly diagnostic, sometimes curative, especially in cases of irregular shedding. It has no value in treatment of polymenorrhea.\(^1\)

Pathology of DUB – Unopposed estrogen increases vascularity of endometrial tissue with relatively scant stroma. The glands have back to back appearance. The resultant endometrium is fragile. In patients of AUB above 30 years presenting with anovulation endometrial aspiration is indicated because of risk of hyperplasia and neoplasia.

**OBJECTIVES:** The study was conducted to find out histopathology of Endometrium in dysfunctional uterine bleeding, and its correlation with clinical findings and age distribution.

**MATERIALS AND METHODS:** After obtaining informed consent and following the ethical principles laid down in the Declaration of Helsinki, one hundred patients reporting to gynecology outpatient department, Chirayu Medical College and Hospital were selected for the study. The study was conducted during the period of one year from November 2012 to October 213. The inclusion criteria were age group 18 to 50 years; complaints of vaginal bleeding lasting for more than 8 days and/or higher frequency i.e. once every 15 days or less and/or pads soaked greater than 5 per day, endometrial thickness more than 5mm on USG. The exclusion criteria were pregnancy, local causes like vaginal/cervical/endometrial growth, infection, thyroid disorders, abnormal blood sugar, coagulation abnormalities and leukemia. Detailed history and examination was conducted to rule out general and local identifiable causes of DUB. Under analgesia, endometrial aspiration was performed by using disposable IPAS™ cannula no. 4 and manual vacuum aspiration syringe. Endometrium thus obtained was sent for histopathology examination.

**RESULTS:** Ten patients belonged to 18-28 years age group. Fifteen patients belonged to 29-38 years and 75 patients belonged to age group 39 to 50 years age. On studying the duration of symptoms it was found that 5 patients had symptoms from 0-2 month duration, 70 patients had symptoms from 3-6 months duration and 25 patients had symptoms from 7-12 months duration. On studying the histopathology, it was found that proliferative endometrium(fig. 1) was seen in 45 patients, secretory(fig. 2) in 20 patients, disordered proliferative phase(fig. 3) in 10 patients, simple hyperplasia in 10 patients, complex hyperplasia in 5 patients and atrophic endometrium in 10 patients.

**DISCUSSION:** L Sushila Devi et al studied endometrium in 50 cases of DUB & 10 normal cases. They found that 54% of patients belonged to 36-45 years age. They found endometrial pattern was proliferative (44%), secretory (20%), irregular ripening (14%), atrophic endometrium (18%), irregular shedding (4%). They concluded that commonest types of endometrium in DUB are proliferative and secretory types\(^6\).

Muzaffer et al studied curetting of 260 patients of DUB in age group of 21-50 years obtained by D&C and pathology was found in 40% of all biopsies with endometrial hyperplasia (24%), chronic non-specific endometritis (13%), endometrial polyp (1.2%), pill pattern endometrium (2.3%), atrophic endometrium (0.8%), menopausal pattern endometrium, squamous metaplasia, squamous cell carcinoma (0.4%). Most patients belonged to 41-50 year age group\(^7\).
Roychoudhury et al studied histological features in 250 patients of abnormal uterine bleeding among which majority 55.2% were premenopausal. They found simple hyperplasia without atypia (95.6%), followed by complex hyperplasia without atypia (3.6%) and complex hyperplasia with atypia (0.8%). Variable sized gland with cystic dilatation (60.4%) was the commonest gland architecture. Atypia was absent in 99.2% cases. 1 case each of endometrial adenocarcinoma and undifferentiated stromal sarcoma were seen.

Riaz et al studied 100 patients in 35-50 years age group with menorrhagia and subjected them to curettage and studied endometrial histopathology. They found that 67% cases were above 40 years. Proliferative endometrium was obtained in 33% cases, secretory endometrium in 26%, cystic hyperplasia in 25% and CA endometrium in one case. Cystic hyperplasia and proliferative endometrium were found above 40 years of age.

Khare et al studied 187 patients by endometrial aspiration. 67% of the cases were in reproductive age group. Proliferative endometrium was seen in 26.8%, irregular maturation in 25%, complex hyperplasia in 6 cases and 1 showed atypia. 16.4% cases showed endometritis. In perimenopausal age group, simple hyperplasia in 29.8%, complex hyperplasia in 3 cases, 1 showed atypia, 6.4% malignancy. In postmenopausal age group, 33.3% had complex hyperplasia, 2 showed atypia, 25% simple hyperplasia, 16.7% showed malignancy and atrophic endometrium in 25% cases.

Doraiswami et al studied 620 patients with abnormal uterine bleed out of which 33.5% were in 41-50 years age. Normal cyclical endometrium (4%), disordered proliferative pattern (20.5%), benign endometrial polyp (11.2%), endometrial hyperplasia (6.1%), carcinoma (4.4%) and chronic endometritis (4.2%) were noted.

Kotdawala et al reviewed abnormal uterine bleeding and found that incidence of abnormal uterine bleed to be 20%. The authors recommend that if focal lesion is present, do office hysteroscopy with directed biopsy. If endometrium looks normal, do vacuum sampling. Endometrial hyperplasia is considered to be present if endometrium is greater than 4 mm thickness in patients with postmenopausal bleed and greater than 12 mm thickness in patients with premenopausal bleed.

Deshmukh et al studied 100 patients 31-49 years in age with DUB. 45% were in age group 41-44 years. They found proliferative endometrium (62%), secretory endometrium (20%), hyperplastic endometrium (13%), irregular ripening (1%), and irregular shedding (1%) on histopathological examination.

Bhonsale and Fonseca studied 112 perimenopausal women in age group 40-52 years with abnormal uterine bleed. They found proliferative endometrium (66.1%), simple hyperplasia (17.8%), and secretory endometrium (16.1%).

**Limitations:** The hospital based study cannot be generalized to the population in general.

**CONCLUSION:** The commonest histopathological pattern was proliferative endometrium suggesting anovulation. Anovulation is common in perimenopausal age group. The commonest age group in the study was noted as 39-50 years. The endometrial histopathology also helps to detect atypia and neoplastic changes. Although our study found 5% cases with complex atypical changes in
endometrium, none of them had endometrial carcinoma. Endometrial aspiration was found to be easy and safe office procedure good with patient compliance.

REFERENCES:

AUTHORS:
1. Farah Jalaly Meenai
2. Prajakta Ganesh Joshi

PARTICULARS OF CONTRIBUTORS:
1. Assistant Professor, Department of Pathology, Chirayu Medical College & Hospital, Bhopal.
2. Assistant Professor, Department of Pathology, Chirayu Medical College & Hospital, Bhopal.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:
Dr. Farah Jalaly Meenai, 'Falak-villa' RiyazManzil Compound, VIP Road, KhanuGaon, Bhopal. Email –zafarah@rediffmail.com

Date of Submission: 21/11/2013.
Date of Peer Review: 22/11/2013.
Date of Acceptance: 27/11/2013.
Date of Publishing: 20/12/2013