ORIGINAL ARTICLE

ENDOMETRIAL PATHOLOGY BY ENDOMETRIAL CURETTAGE IN MENORRHAGIA IN PREMENOPAUSAL AGE GROUP

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Background: Menorrhagia is objectively defined as blood loss greater than 80 ml or menstrual period lasting longer than 7 days. Dysfunctional uterine bleeding is responsible for 80% cases of Menorrhagia. Objective of this study was to find out the endometrial pathology and usefulness of hysterocopic directed endomentrial sampling in patient having menorrhagia in premenopausal age group. **Methods:** This prospective descriptive study was conducted at Unit 1 of the Department of Obstetrics and Gynaecology, Fauji Foundation Hospital Rawalpindi, Pakistan from January to December 2007. During the study period, 100 patients with menorrhagia in age group 35–50 years were selected after fulfilling the inclusion criteria. These patients were selected from Gynaecology out patient department. After detailed history, examination and ultra sonography, they were admitted and hysteroscopic directed endometrial sampling was done endometrial samples were sent for histopathology to find out the endometrial pathology. **Results:** The selected patients of my study with menorrhagia were scattered over all premenopusal age groups >35 years. It was observed that 67 patient were above the age of 40 years. The analysis of histopathology reports of endometrial curettage revealed proliferative endomentrium in 33%, cystic hyperplasia's in 25% and carcinoma endometrium in one case. Cystichyperplasia and proliferative endometrium were found in menorrhagic women over 40 years of age. Adenoicarcinoma was found in a single premenopausal women of 48 years. **Conclusion:** All patients having menorrhagia above 40 years should be screened for any endometrial pathology. Accurate analysis of endometrial sampling is the key to effective therapy and optimal out come.

Keyword: Hysterocopic guided endometrial curettage, Menorrhagia, Premenopause DUB

INTRODUCTION

Menorrhagia (also called hypermenorrhoea) refers to excessive or prolonged menstrual bleeding occurring at regular intervals. It is objectively defined as blood loss greater than 80 ml/[1] or menstrual period lasting longer than 7 days.

Dysfunctional uterine bleeding is responsible for 80% cases of Menorrhagia.[2]

This menstrual disorder affects approximately 2.5 million American women yearly. Many of them seek help from their health care providers and are unable to get to work.[3]

The most common cause of menorrhagia in post adolescent women is distortion of endometrial architecture from a submucous lieomyoma, endometrial polyp, or adenomyasis. Coagulopathy should also be excluded. Systemic disorders (hypothyroidism, liver disease, cirrhosis, chronic renal disease) and chronic endometritis, intrauterine devices are also associated with menorrhagia.

An endometerial biopsy should be performed on all women over 35 with menorrhagia to rule out endometrial cancer or premalignant lesion (e.g atypical hyperplasia).[4] Endometrial biopsy also should be considered in women between the age 18 and 35 years with DUB who have risk factors for endometrial cancer. Endometrial cancer or endometrial hyperplasia are two important pathologies that needed to be excluded in women with menorrhagia.[5] The incidences of endomentrial cancer as cause of uterine bleeding increases with increasing age. Adenocarinoma of the endometrium is the most common genital Cancer in women over 45 years of age.[6] The detailed investigation for menstrual disorders best achieved by hysteroscopy and endometrial sampling.[7]

MATERIAL AND METHODS

In this prospective descriptive study, a total of 100 patients of 35–50 years with menorrhagia who attended outpatient department of Gynaecology in Fauji Foundation Hospital, Rawalpindi, fulfilling inclusion and exclusion criteria were included in a period of 1 year. The data of each patient was recorded in identical pre-designed protocol proformas after informed consents.

After assessment, detailed history was taken regarding age, amount, duration and pattern of bleeding, other associated gynaecological problems, Details examination was performed including abdominal and pelvic examination. Ultrasonography was done. Patients were admitted in gynaecology ward for one day. Full investigations including. Full blood count, Hb% and platelet count and hystereoscopic guided endometrial curettage were done. Endometrial samples were sent to pathology department to find out frequency of endometrial pathology in case of menrorrhagia. Follow up visits were advised after 3 weeks with histopathology results. Histopathology results of endometrial tissues

were entered in specifically designed proforma. Date was analysed by SPSS-11 version.

RESULTS

A total of 100 premenopausal women with menorrhagia were included in my study. I had excluded in our study the women with menorrhagia due to uterine fibroids, bleeding diathesis (Von willebrands disease), hypothyrodism, liver diseases, systemic lupus erthymatous and other endocrinopathies such as diabetes, cushing syndrome, and cervical lesion. Women with postmenopausal bleeding were also excluded. Results of this data met the inclusion criteria of our study.

Out of total 33 cases were in age group 35–39, 27 in age group 40–44 and 40 in age group 45–49 years.

The analysis of results of the study of endometrial biopsies in case of menorrgagia revealed the diagnosis of Proliferative endometrium in 33% women, secretory endometrium in 26 cases. Cystic hyperplasia was observed in 25 cases and carcinoma endometrium in one case (Table-1).

Non-specific endometriosis and secretory endomerium were mostly observed in age group of 35–39 years.

Cystichyper plasia and proliferative hyperplasia were found in menorrhagia women over 40 years of age. A single case of adenocarcinoma was found in a premenopansal women of 48 years (Table-2).

Table-1: **Histological pattern of endometrial tissue in 100 cases of premenopausal women with menorrhagia**

Histological Pattern	Percentage
Proliferative phase	33
Secretory phase	26
Simple cystic hyperplasia	25
Chronic non specific endometritis	13
Adenocarcinoma	1
Chronic granulomatous endometritis	1
Adenomatous hyperplasia	1

Table-2: Frequency of histological pattern in premenopausal age group

	Age group (Yrs)			
Histological Pattern	35–39	40–44	45–49	Total
Simple cystic hyperplasia	0	7	18	25
Proliferative phase	9	13	11	33
Secretory phase	12	7	7	26
Chronic non specific endometritis	12	0	1	13
Chronic granulomatous endometritis	0	0	1	1
Adenocarcinoma	0	0	1	1
Adenomatous hyperplasia	0	0	1	1
Total:	33	27	40	100

DISCUSSION

The normal menstrual cycle is defined as having a mean interval of 28±7 with a mean duration of 4±3 days.[8] the amount of blood loss average 30 ml per cycle but may be as high as 80 ml. Menorrhagia is primarily a subjective complaint perceived by women as heaviness of her period.[9]

The causes of menorrhagia may often be recognised on a careful history and examination alone, although the majority require more thorough evaluation causes may be local, systemic and dysfunctional. Population studies have shown that approximately 10% women have menstrual blood loss greater than 80ml cycle.[7]

Anovulatoy dysfunctional uterine bleeding is a disturbance of the hypothalamic pituitary ovarian axis that results in irregular, prolonged and sometime heavy menstrual bleeding. Unopposed oestrogen stimulation may lead to endometrial proliferation and hyperplasia, ovulatory dysfunctional uterine bleeding may include menorrhagia.[9]

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.[10]

The main objective of endometrial curettage in excessive uterine bleedings to exclude the possibility of local intra uterine lesion such as incomplete abortion, uterine polyp, tuberculous endometritis and carcinoma as a cause of bleeding and to obtain endometrium for the study of its hormonal response. Diagnostic hysteroscopy with directed biopsy or curettage is undoubtedly the technique of choice for imaging the uterine cavity.[11]

Formal dilation and curettage is commonly used in developing countries as the standard and often sole means of assessing abnormal uterine bleeding in women of middle and advanced age.

In our study, 100 women with menorrhagia >35 years of age were investigated using endometrial sampling as the sole primary method as in 102 women with menorrhagia >35 years of age in Trinidad.[12]

In our study most of the patients with menorrhagia were above the age of 40 years which was similar to study by Mackenzie[13], and study in Peshawar[14].

In our study, many women revealed endometrial curettings with normal histology, like proliferative endometrium (33%) in a age group of about 45–49 years and secretory endometrium (26%) in age group of about 35–39 years while proliferative endometrium was found to be 58.6% in menorrhagic women in study from Peshawar[14] and in a study by Fraser it was found in 15.93% of patients.[15]

In a study by Histoshi 38.8% mid secretory endometrium was observed in 160 patients with menorrhagia.[16] Chronic endometritis which is characterized by irregular fibrotic stroma and infiltrate

of Lymphocytes and plasma cells has been known to follow pregnancy or abortion may be result of intrauterine contraceptive device or accompanied by mucoprulent cervicitis and pelvic inflammatory disease.[17]

The extension of this infection may be contributing to high incidence of pelvic inflammatory disease in our country. Other infections like chlamydial and viral infections of the endometrium which are sexuality transmitted may also be responsible for high case of endometriosis.

In our study, 13% of menorrhagia women in age group of 35–39 years had chronic non specific endometriosis while in study from Arkansas, chronic endometriosis was observed in 3–10% women of 35 years of age with menorrhagia who underwent endometrial biopsy.[18] While in study by Goldstein, 26 (17%) women with menorrhagia had isolated endometrituis.[19]

The process of tuberculous endometriosis does not seem to be as common as generally as considered. I had only one case of this infection as in the study by Luqman.[20]

The aetiology and significance of hyperplastic endometrial lesions is debated. Exposure of endometrium to continuous oestrogen unopposed by progesterone can lead to endometrial hyperplasia. The diagnosis of endometrial hyperplasia should be suspected in women with heavy, prolonged, frequent or irregular uterine bleeding. In particulars abnormal uterine bleeding in perimenopausal women is the most common symptom of endometrial neoplasia, although such bleeding is usually 80% due to a benign condition.[19] Atypical hyperplastic pattern may also occur after prolonged anovulation in the Stein-Leventhal Syndrome which regresses after therapeutic induction of ovulation. Most of these patients respond to progesterone. Progression of hyperplastic lesions to carcinoma has also been observed.

In our study, 25% simple cystic endometrial hyperplasia and 1% adenomatous hyperplasia, while in a study from Peshawar, endometrial hyperplasia was the cause of menorrhagia in 6 cases (4.95%).[14] The incidence of atypical hyperplasia like adenomatous hyperplasia was low in our study (1%), while it was 4% in a study by Luqman.[20]

Fortunately I discovered a single case of endometrial carcinoma on curettage similar to a study from Peshawar[14], which denotes the low frequency of this malignancy in our country while in a study by Moghal N (1997) endometrial curetting from 187 patients presenting with menorrhagia revealed 2 case (0.44% endometrial Adenocarcinoma) one case (0.21% carcinosarcoma, one (0.21%) metastatic mucinous adeno carcinoma.[21] In a study by Fraser (1995) on 117 menorrhagia women, two cases of adenocarcinoma were found.[15]

Endometrial carcinoma is considered to be the most common malignancy of the female genital tract in the United States. Endometrial cancer is the fourth most common cancer in women, accounting for approximately 6,000 deaths per year in the United Sates.

CONCLUSIONS

All patients having Menorrhagia during reproductive age and above 40 years should be screened for any endometrial pathology. Accurate analysis of endometrial samplings is the key to effective therapy and optimal outcome. Menorrhagia, whilst not usually life threatening, can cause disruption and discomfort for many women. Improvement in management will only come from increased awareness of the problems of perception and tolerance of bleeding, and of the need for improved precision in diagnosis using technique like endometrial curettage. An understanding of the under lying causes and mechanism of abnormal bleeding will allow a more rational approach to treatment of the individual women.

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