MEDICAL CHANNEL

Original Article

"ENDOMETRIUM HISTOLOGY IN ABNORMAL UTERINE BLEEDING"

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ABSTRACT:

Objective: To determine endometrial causes of abnormal uterine bleeding.
Study design, Setting & Methods: Descriptive study carried out at Gyn/ obs department unit 1V Lyari General Hospital from Jan 2008- Dec 2009. Out of 728 gynae admissions 86 premenopausal women with abnormal uterine bleeding were selected for further workup. premenopausal group include menstrual group (20-40 years) and perimenopausal group (>40 years).
After general & local examination & necessary investigations these women underwent hysteroscopic guided endometrial biopsy under anaesthesia. Details of histopathology obtained from laboratory.
Results: All admitted premenopausal women with abnormal uterine bleeding were studied. Majority 97.7% was multiparous & menorrhagea was main mode of presentation. Histology of endometrium in menstrual group : normal endometrium 52%, endometritis 26%, endometrial polyp 17.3% , simple hyperplasia 4.3%. In perimenopausal group: normal endometrium 20%, endometritis 50%, cystic hyperplasia 30%. Non had atypical hyperplasia & endometrial cancer.
Conclusion: Risk of endometrial hyperplasia is high in perimenopausal women with abnormal uterine bleeding. Endometrial biopsy is recommended in them.

Key words: Abnormal uterine bleeding, endometrial biopsy, transvaginal ultrasonography, hysteroscopy, endometrial hyperplasia, endometrial cancer.

INTRODUCTION:

Abnormal uterine bleeding (AUB) is excessive, erratic, or irregular bleeding not associated with intrauterine pathology [1]. Its most common presenting complaint in women regardless of age [2]. One half of women by age 45.5 years, three quarter by age 47.8 years & 95 % by age 50.8 years experience menstrual disturbance [3]. It has been estimated that around 6% of women aged 25-44 years consult their general physician about excessive menstrual loss every year, around 35% of these referred to hospital and 60% of them underwent hysterectomy in the next 5 years [4, 5, 6]. Over 75000 hysterectomies are now carried out every year & 25-30 % of them is for menstrual disturbance [1,7].
Premenopausal vaginal bleeding can be ovulatory, anovulatory or anatomic. The ovulatory bleeding is more common in menstrual group (20-40 years) & anovulatory is frequent at extremes of reproductive age. Fibroids & endometrial polyp are most common cause of anatomic AUB [8]. Main aim of investigating them is to rule out organic diseases of the uterus. Diagnostic techniques are transvaginal ultrasonography (TvUSG) & endometrial biopsy. TvUSG is first line, non-invasive, least expensive diagnostic technique. In the absence of visible anomalies (e.g fibroid), endometrial thickness & homogeneity has been used as marker of endometrial pathology [2]. Sonohysterography had a better value than the conventional TvUSG [9]. Office endometrial biopsy (pipelle) is an easy method but can miss focal lesions & detection rate for endometrial cancer is 91% [2]. Invasive techniques of endometrial biopsy are blind uterine curettage & hysteroscopic guided

endometrial biopsy. Blind curettage can miss upto10% of disease [10]. Hysteroscopic endometrial biopsy has replaced blind technique as method of choice & subsequently became "gold standard" [11,12]. Aim of study is to determine endometrial causes of premenopausal AUB on hysteroscopi In premenopausal women presenting with AUB and no obvious cause on TvUSG further workup (endometrial biopsy) is controversial. Rationale of study is to find out appropriateness of endometrial biopsy in all cases of AUB.

MATERIAL & METHODS:

The study population includes 86 premenopausal women with AUB. Premenopausal women comprises menstrual (age 20-40 years) group & perimenopausal (age >40) group. After admission from OPD for further workup, cases with clinical diagnosis of anatomic AUB or those with complications of pregnancy were excluded. Demographic features & symptoms were recorded. Detailed general physical examination for evidence of systemic disease & bimanual pelvic examination for detection of genital tract disease was done. High vaginal swab & cervical cytology were sent if current & normal reports were not available. Lab investigations like complete blood count & serum ferritin & Tv USG for endometrial thickness & obvious ovarian & uterine disease were carried out. All subjects with consent underwent examination under anesthesia & hysteroscopic guided endrometrial biopsy after fitness for intravenous anesthesia. Histopathology reports were obtained from laboratory.

Statistical analysis is performed by SPSS program 10. For categorical data frequency and percentage.

RESULTS :

Out of 728 gynae admissions, 86 premenopausal women with AUB were recruited for study. Proportion of AUB cases is 11.8% of gynae cases. Out of them 46 (53.4%) were between 20-40 years (menstrual group) & 40 (46.5%) were > 40 years (perimenopausal group). Majority 97.7 % was multiparous except 2 (2.3%) nulliparous were from menstrual group. Main mode of presentation is menorrhagea in menstrual group (69.5%) & in perimenopausal group (80%), followed by polymenorrhea (17.3%) in menstrual group & polymenorrhagea (7.5%) in perimenopausal group. (Table I) Histological findings of endometrium in menstrual group : normal endometrium 52% (secretory 34.7% + proliferative 17.3%), endometritis 26%, endometrial polyp 17.3%, simple hyperplasia 4.3%. Histological findings of endometrium in perimenopausal group: normal endometrium 20% (secretory 5% + proliferative 15%), endometritis 50%, cystic hyperplasia 30%. (Table II). Non had atypical hyperplasia & endometrial cancer.

Table 1:
Abnormal uterine bleeding
MODE OF PRESENTATION
N=86

Presentation	Menstrual group n=46		Perimenopausal grup n=40	
	No	%	No	%
Menorrhagea	32	69.5	32	80
Metrorrhagea	2	4.3	2	5
Polymenorrhea	8	17.3	2	5
Polymenorrhagea	2	4.3	3	7.5
Metropathica haemorrhagica	2	4.3	1	2.5

Table II:
Abnormal Uterine Bleeding
Histological findings of Endometrium
N=86

Histological findings	Menstrual group n=46		Perimenopausal group n=40	
	No	%	No	%
Proliferative	8	17.3	6	15
Secretory	16	34.7	2	5
Endomeritis	12	26	20	50
Endometrial polyp	8	17.3	0	0
Simple hyperplasia	2	4.3	0	0
Cystic hyperplasia	0	0	12	30

DISCUSSION:

Endometrial cancer is the most common female genital tract malignancy [10]. The annual incidence of endometrial cancer is 19.5 /100,000 [13]. AUB is frequent symptom of endometrial carcinoma [14, 15]. One in 4 cases of endometrial cancer occur before menopause [13]. As with postmenopausal bleeding, abnormal perimenopausal bleeding is associated with endometrial carcinoma in approximately 10% of cases[15]. Endometrial biopsy with or without hysteroscope is recommended for cases of AUB to rule out endometrial cancer, its precursor lesions & endometrial hyperplasia [16]. This conventional, invasive approach carries operative risk & not convenient for either the patient or the physician, question have arisen regarding the appropriateness of performing endometrial biopsies in all cases of premenopausal AUB.

In this study proportion of AUB cases 11.8% is falling in range 9-14 % reported in literature [17]. In one local study its 16.1% [18]. This high proportion shows AUB is major contributor of gynaecological problems. Main mode of presentation is menorrhagea similar to other studies [16,18,19]. In menstrual group normal endometrium is most commons finding, also encountered in other studies [2,16]. Frequency of endometrial polyp 17.3% is comparable with prevalence of anatomic AUB (endometrial polyp, fibroid) 25% reported in literature[21]. Endometritis is an unusual finding encountered in both menstrual & perimenopausal group not supported by other studies [16,20]. Endometritis is complication associated with cesarean section, but may occur after spontaneous vaginal delivery, spontaneous or therapeutic abortion as well as intrauterine contrceptive device insertion. Frequency of pathological endometrium (hyperplasia) is very high in perimenopausal women as compared with menstrual group. Anovulatory bleeding is common at extremes of reproductive age which posses a high risk for endometrial hyperplasia. In one study by Machado et al frequency of endometrial hyperplasia is 17.1% in menstrual group [16]. Possible reason of this high frequency could be menstrual

group in this study is upto 45 years of age. Frequncy of AUB (after exclusion of organic causes) in menstrual group is 52% & in perimenopausal group is 20%. As reported in literature organic cause of AUB is 50-60% [22]. One local study found frequency of AUB in hysterectomy specimen is 6% as pathologies of uterus like adenomyosis causing AUB are also excluded on hysterectomy[19]. MRI a costly investigation can detect adenomyosis but is not routine before endometrial biopsy in our department.

Non of our case had atypical hyperplasia & endometrial cancer similar to other studies [19,21]. Reason for it could be age group studied, multiparity & early child bearing.

One study in turkey found frequency of endometrial cancer 5.5% in premenopausal women with AUB [2]. Therefore this age is not free of risk.

CONCLUSION :

Etiology of AUB in premenopausal women is primarily benign. Risk of endometrial cancer & its precursor lesions is less in menstrual women. Uterine curettage for endometrial biopsy to rule out endometrial causes of AUB should be reserved for perimenopausa l(>40 years) women.

RECOMMENDATIONS:

Evaluation of AUB is mandatory in perimenopausal women.

In menstrual group (20-40 years) endometrial biopsy is only indicated for cases with risk of endometrial cancer (nulliparity, weight >90 kg, on tamoxifen, family history of endometrial cancer), inconclusive sonogram and not responding to medical treatment.

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