Indian Menopause Society

Guideline Number 4 : August 2010

Evaluation and Management of Post-menopausal Bleeding

Post-menopausal bleeding (PMB) is not an uncommon clinical presentation in today's gynaecological practice. Contributory factors are perhaps increasing longevity, obesity and hormone therapy both supervised and unsupervised. Increasing numbers of women seeking help or reassurance for this problem due to increased awareness would also contribute to this increase . PMB occurs in approximately 3 % of post menopausal women.[1]

Definition

The menopause is defined by the WHO as the permanent cessation of menstruation resulting from the loss of ovarian follicular activity.[2]

The definition of PMB and what is clinically significant is however varied. By definition PMB is bleeding that occurs 12 months after the last normal period.[2] However it is recommended that any vaginal bleeding that occurs 6 months after the last period (presumed menopause) should be investigated.

Significance of PMB

In post menopausal women the endometrial thickness is considerably less than premenopausal women. Endometrial thickness is directly related to endometrial pathology.

The risk of endometrial cancer at the age of 50 in a woman with PMB is approximately 1 % and rises to 25 % at the age of 80.[3]Of women diagnosed to have endometrial carcinoma, more than 90 % present with irregular peri-menopausal bleeding or PMB. The incidence of significant pathology in women with PMB is only 20 %.[4]

Causes of PMB

The causes of PMB include Atrophic vaginitis, vaginal, cervical and endometrial polyps, endometritis and trauma .Pruritus vulva due to Vulval dystrophies may also present as PMB. Exogenous sources of Oestrogen like hormone therapy .and especially plant sources of oestrogen have to be kept in mind. Bleeding disorders , although rare have to be considered.

Malignant disease arising from the vulva , vagina, cervix endometrium to the fallopian tubes may present as PMB. Oestrogen producing tumours – benign and malignant may result in PMB.

EVALUATION OF PMB

History

The nature of current bleeding – first episode, persistent or recurrent, along with history of perimenopausal dysfunctional bleeding and /or Endometrial hyperplasia should be elicited. The presence of other co-morbid factors such as Diabetes, Hypertension[5], Nulliparity and use of unopposed Estrogen therapy, should be recorded. In addition the women should be asked about history of treatment with Tamoxifen, Tibolone and cyclical/continuous combined HT. Early menarche and late menopause are also associated with increased likelihood of Endometrial hyperplasia / Carcinoma.

Examination

A thorough general and local examination is mandatory. The difficulty of this in post menopausal women should be borne in mind. The primary aim of this is to rule out vulval ,vaginal, cervical and pelvic pathology.

Atrophic vaginitis, cervical polyps and ulceration from ring pessaries can be determined. Haematuria and bleeding per rectum (Haemorrhoids) should be kept in mind. The conventional Pap smear or Liquid Based Cytology can detect abnormal endometrial cells in upto 30% of the cases.[6]

Investigations

The principal aim of investigation of PMB is to identify or exclude endometrial pathology, most notably endometrial carcinoma.

Women with spontaneous PMB should be primarily evaluated with trans vaginal sonography(TVS) to measure the thickness of the endometrial echo complex (EEC).

When the thickness is more than 4 mm an outpatient endometrial sampling is performed.[7]

Further evaluation of the EEC by saline infusion sonography (SIS) and / or 3D ultrasound reconstruction is recommended when the tissue yield is inadequate.

TVS

The initial assessment in all cases of PMB should be using the USG especially TVS.

Measurement of the endometrium on USG should include the full double thickness of the endometrium with any content within the endometrial cavity.

USG also provides an opportunity to evaluate the pelvis for any related or incidental pathology especially the ovaries.

As opposed to diffuse thickening of the endometrium focal pathology like submucous fibroids and endometrial polyps can be diagnosed using SIS and / or 3D USG.

The addition of colour Doppler imaging does not add benefit to the diagnosis nor it does influence further management.[8]

TVS has a high sensitivity but a relatively poor specificity. In women with PMB and women on Tamoxifen further evaluation of the thickened endometrium can be performed using either /or 3D reconstruction or SIS.

MRI
MRI is of value only in Endometrial carcinoma in delineating the size and size of the primary tumour and myometrial invasion. The presence of enlarged lymph nodes and cervical involvement can be made out.

Hysteroscopy
Hysteroscopy may be performed as an outpatient procedure using CO2 or as an in-patient procedure. It is especially useful in evaluating focal thickening and in diagnosing uterine polyps and uterine anomalies.[9]

Endometrial Biopsy
The endometrium may be sampled using the Pipelle or Probet endometrial curette as an out patient (OP) procedure. The Pipelle samples only 4.2% of the endometrial surface.[10,11] The endometrial aspirator samples about 41.6% of the endometrial surface but is less well tolerated.[12] It is also possible to use a Size 4 Karmann's cannula for endometrial sampling.
The 10% failure rate of OP sampling procedure is due to cervical stenosis in post menopausal women. When the procedure has been performed there may be a poor tissue yield .Out patient sampling of the endometrium is comparable to hysteroscopy for diagnosing endometrial hyperplasia.[9]

Dilatation & Curretage (D&C)
D&C should no longer be the first line method in the evaluation of PMB. Lesions can be missed in up to 10% of the cases.[13]
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RECOMMENDATIONS
Women with PMB may be categorized as those with spontaneous bleeding and those with bleeding whilst on Tamoxifen or Hormone Therapy (HT).

Women With Spontaneous PMB
96% of women with endometrial carcinoma and 92% of women with benign endometrial pathology can be identified when a 4 mm cut off is used for endometrial thickness(ET) using TVS.[8] The pretest probability of endometrial cancer of 10% in a woman with spontaneous PMB will be reduced to 1% following a normal TVS.[14]
Endometrial thickness of >4mm warrants histological evaluation either as outpatient endometrial sampling or hysteroscopy directed endometrial biopsy.
Those patients on conservative management (ET<4mm) repeat TVUS is indicated if bleeding persists or recurs.[15]
Fluid in the endometrial cavity may be seen in postmenopausal women in the absence of pathology.

Women with PMB on Tamoxifen
Women on Tamoxifen for treatment of breast carcinoma and more recently for the prevention of breast carcinoma have an increased risk of endometrial carcinoma. (2/1000 treated women)

ET of 8 mm has a PPV of 100% at detecting endometrial pathology.[16]Some studies have quoted 9mm as a cut off to necessitate Endometrial biopsy. Current evidence does not justify the use of any investigation in postmenopausal women receiving Tamoxifen in the absence of PMB.[17]

Pre treatment screening is now recommended .Presence of submucous myomata, polyps, simple and atypical hyperplasia and even endometrial carcinoma can then be determined prior to starting Tamoxifen.[18]

Women with PMB on HT

In women on HT the cut off of 4mm results in a high false positive rate. Interpretation of the endometrial thickness should be related to the phase of HT i.e ideally 5-10 days from the end of the progesterone phase and any time during continuous combined treatment.

It is unnecessary to evaluate the endometrium of women with uterine spotting or bleeding in the first 6 months of continuous combined therapy.[19]
In women on cyclical HT , withdrawal bleeding outside the time of progestin therapy should be evaluated.[19]

Differential Diagnosis

Whenever a woman presents with PMB the possibility of haematuria and bleeding from haemorrhoids should be considered and ruled out. All possible causes of PMB should be kept in mind and ruled out by appropriate investigation.

Treatment

Atrophic vaginitis is a common cause of PMB and is effectively treated with local application of estrogen.
Endometrial polyps are best removed during the Hysteroscopic evaluation and sent for HPE.The endometrium should also be sampled and sent for HPE as the likelihood of Endometrial hyperplasia is high(3% of polyps)
Women with PMB and Endometrium <4mm can be followed up with a repeat USG 3 months later unless the patient has further episodes of bleeding.
If the endometrial thickness is >4mm a biopsy is performed either as outpatient or hysteroscopy directed. Endometrial hyperplasia without atypia respond well to hormonal therapy.
The use of Levonorgestrel Intra-Uterine System is preferred to systemic therapy.
Hyperplasia with atypia , simple or complex warrants definitive surgical management.

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