Case Discussion in Obstetrics Gynaecology

Approach to A Case Presented with Bleeding per Vagina

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Bleeding per vagina as a presenting complaint is found in as high as 1/3rd of females attending health care facilities. In reproductive age groups, it may be due to gestational & non gestational causes. Abnormalities in menstrual cycle involving frequency, regularity, duration & volume of flow is termed as abnormal uterine bleeding (AUB). After excluding pregnancy, the cases are categorized by an acronym for common aetiologies [PALM-COEIN]. Then AUB has to be investigated thoroughly to find out any organic cause, both genital & extra- genital, as per the age group. This article focusses on evaluation and outlines the treatment approach in case of abnormal bleeding per vagina.

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Bleeding per vagina as a presenting complaint is found in as high as 1/3rd of females attending health care facilities[1]. In reproductive age groups, it may be due to gestational & non gestational causes. A normal menstrual cycle has a frequency of 24 to 38 days, lasting for 5-7 days with blood loss of 5-79 ml[2]. Abnormalities involving frequency, regularity, duration & volume of flow is termed as abnormal uterine bleeding (AUB), defined by the International Federation of Obstetrics and Gynaecology (FIGO) in 2011. In 2018, they categorized the cases by an acronym for common aetiologies [PALM-COEIN][1]. Globally AUB is reported to occur in 9 to 14% women between menarche and menopause[3]. In India, it is difficult to find the true incidence because the women seek treatment if they are compelled to be absent from work or significantly compromised in quality of life[4]. It may be due to pregnancy related complications or gynaecological (non pregnant) causes.

It is mandatory to rule out pregnancy in woman in reproductive age group presenting with bleeding per vagina by simple urinary pregnancy test unless it is revealed clinically as in late 2nd or 3rd trimester.

In gynaecological cases, the patients are then categorized into different groups viz, prepubertal, adolescent, reproductive age group, perimenopausal & postmenopausal groups. It is better to brush up the possible causes as per the category as follows.

Gynaecology :

(A) Prepubertal : Trauma/sexual abuse/ foreign body in vagina/vulvovaginitis/ precocious puberty/ Exogenous hormones or hormone producing neoplasia (germ cell tumour/ granulosa cell tumour).

(B) Adolescent age group : Anovulatory DUB / Pregnancy related complications/Endocrinology-(Thyroid dysfunction, PCOD)/Coagulation disorders (von Willebrand's disease;ITP)/Infection(PID/genital TB)/ hormone producing neoplasm or exogenous hormones.

(C) Reproductive age group : DUB(ovulatory or anovulatory)/Endocrinopathy (Thyroid disorder, PCOD)/ Neoplasia (eg, leiomyoma, adenomyosis, hormone producing tumours)/Infection (TB,PID)/Exogenous hormone intake.

(D) Perimenopausal age group : Anovulatory DUB/ Neoplasms of upper & lower genital tract (Benign or malignant).

(E) Post-menopausal age group : Endometrial hyperplasia/ cervical or endometrial carcinoma apart from atrophic vaginitis, exogenous Hormone Replacement Therapy (HRT) or pessary.

Editor's Comment :

- Exclude pregnancy first in a woman presented with bleeding P/V.
- Use PALM-COEIN aetiological classification for the diagnosis of AUB.
- Obtain a detailed history and conduct a thorough physical examination to direct the need for further investigation.
- USG is mandatory in any case of bleeding P/V or AUB to evaluate uterus, adnexa and endometrial thickness.
- To offer the best therapy as per aetiology, do proper counselling & follow evidence-based medicine.

Obstetric Causes :

(A) Early trimester-miscarriage/H mole/ectopic pregnancy/implantation bleeding.

(B) Late pregnancy- APH/rupture uterus/ Coincidental cause like piles.

(C) Puerperal/ post abortal complications

With this background knowledge of the possible causes as per age group, a detailed history taking, a thorough clinical examination and relevant investigations are to be done to clinch the diagnosis.

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Diagnostic Approach

A patient with bleeding per vaginally should be approached in the following way:

- Is the patient haemodynamically stable ?
- Is she pregnant ?
- If not what are possible causes of bleeding per-vagina at this age group ?

History

Salient points in history :

Consider the following relevant points during history taking in cases of AUB:

- Age (cause for AUB may vary among different age groups)
- Socioeconomic status (SES; Ca cervix is common in lower SES and Ca endometrium in higher SES)
- Parity (fibroid and endometrial carcinoma are common in nulliparous women; adenomyosis and Ca cervix are commnon in multiparous women)

Presenting complaints Examples of presenting complaints in AUB include:

- H/o excessive bleeding during bleeding phase
- Irregular heavy bleeding
- Continuous bleeding for a few days with preceding amenorrhea for 2-3 months.

Detailed history of the abnormal bleeding should be taken

- Regularity of cycles, duration of flow and amount of bleeding (excessive, average, scanty)
- Pattern of abnormal bleeding-menorrhagia, polymenorrhea, oligomenorrhea, hypomenorrhea, metrorrhagia, and menometrorrhagia
- Associated passage of clots
- Type of protection-sanitary pad/cloth
- How frequently pads are changed (number of pads changed may not correlate with the amount of blood loss)
- H/o preceding amenorrhea (may indicate anovulatory bleeding or pregnancy-related causes.
- Additional symptoms that may provide a clue to the underlying disease are the following:

■ H/o dysmenorrhea- fibroid, adenomyosis, endometriosis, and PID (an ovulatory bleeding usually is not associated with pain)

- Spasmodic dysmenorrhea-in ovulatory cycles
- Congestive dysmenorrhea-in endometriosis and PID

■ H/o dyspareunia-endometriosis

■ H/o infertility-endometriosis

■ H/o abdominal pain-PID

■ H/o vaginal discharge-PID

■ H/o postcoital bleeding (Ca cervix, cervical polyp, cervical erosion, etc)

■ H/o intermenstrual bleeding (submucous fibroid, Ca cervix, cervical polyp, cervical erosion, etc.)

■ H/o combined oral contraceptive (COC) pill or IUCD usage

■ H/o use of any hormones and drugs (unless directly questioned, the patient may not reveal this history)

■ H/o easy bruising/prolonged bleeding from wounds, heavy bleeding after surgery or dental procedures (suggestive of bleeding disorder)

■ H/o fever/cough/night sweats (suggestive of tuberculosis)

■ H/o weight gain, lethargy, hair loss, hoarse voice, cold intolerance, and constipation (suggestive of hypothyroidism)

■ H/o weight gain/acne/hirsutism (suggestive of PCOD)

■ Headache accompanied by visual changes is suggestive of a pituitary tumor.

■ Any thyroid disorder manifested by weight gain, chronic fatigability, alopecia, skin changes to be taken in account

Menstrual History :

- Age at menarche
- Previous Cycles-regular/trregular
- Flow for—days
- Amount of bleeding-excessive, average or scanty
- Associated dysmenorrhea and passage of clots
- Last menstrual period (LMP)

Marital History :

- Married for —— years

■ H/o multiple sexual partners [risk of PID and sexually transmitted diseases (STDs)]

Obstetric History :

- Parity
- H/o of infertility (may be due to anovulation, endometriosis, fibroid, etc, which are causes of AUB)
- Time of last childbirth/miscarriage /mode of termination & any complications thereafter
- Contraception used, if any (irregular intake of COC pills and IUCD usage may present with AUB)

Past History :

- H/o diabetes mellitus (DM) and hypertension.
- H/o surgery
- H/o blood transfusion
- Thyroid disorder
- Tuberculosis

Family history

- Tuberculosis
- Any coagulation disorders
- Family H/o genital malignancy

Physical examination should be directed towards

assessing

- Patient vitals
- Any ongoing bleeding present or nor
- Identifying the aetiology.

General Examination :

- Height, weight, and body mass index (obesity and weight loss are risk factors for ovulatory dysfunction)
- Hirsutism, acne, and acanthosis featiures (PCOD) looked for
- Pallor-to know the severity of bleeding
- Lymphadenopatny (tuberculosis, leukemia or lymphoma)
- Vitals -temperature, puise, BR respiratory rate
- Thyroid examination-any thyroid swelling
- Breast examination- Galactorrhea (prolactinomas is associated with anovulation); any probable mass (fibroadenoma is associated with hyperestrogenism)

Abdominal Examination :

- Palpate for organomegaly-splenomegaly in idiopathic thrombocytopenic purpura (ITP), hepatosplenomegaly in leukemia.
- Abdominopelvic mass may be palpable in structural causes of AUB such as fibroid and adenomyosis

Note *— No mass is palpable in DUB.*

Pelvic Examination

Inspection of external genitalia

Whether healthy or presence of any lesion /ulcers/ growth to be noted.

Per speculum examination

Any cervical and vaginal pathology (cervical growth, cervical polyp, cervicitis, any abnormal discharge, etc) Per speculum and bimanual examination are essential in case presentations (not by under graduate students). Per speculum and bimanual pelvic examination should not be done in adolescent girls who are not sexually active.

Bimanual pelvic examination —

- Uterus size (enlarge in pregnancy, fibroid, adenomysis.)
- Uterine tenderness (present in PID, adenomyosis)
- Adnexal mass (ovarian cyst, ovarian tumour, tubo-ovarian mass, ectopic pregnancy)
- Adnexal tenderness (present in PID, ectopic pregnancy)

Per rectal examination

Nodularity can be felt in POD and along the uterosacral ligament in endometriosis, PID & tuberculosis.

Abdominal examination should be done to assess any lump per abdomen, abdominal tenderness, and peritoneal signs.

Pelvic Examination- Any signs of trauma, foreign bodies, products of conception, presence of bleeding or discharge per vagina.

Per speculum - To assess the source of bleeding, cervical or vaginal trauma, cervical lesions/polyp, cervical discharge etc.

Per vaginal examination- Assessment of uterine size and surface contour, adnexal mass or tenderness, and cervical motion tenderness.

Per rectal examination- To be done in unmarried women, or if the source of bleeding remains unclear, to check for hemorrhoids & any special findings like nodularity.

Laboratory Tests :

- A complete blood count (CBC) is recommended
- Perform a urine for pregnancy test whenever indicated, or if pregnancy is suspected.
- Bleeding time, platelet count, prothrombin time, and partial thromboplastin time are recommended in all adolescents and in adults with a positive screen for coagulopathies. Further testing for von Willebrand disease, ristocetin cofactor activity, factor VIII activity, and von Willebrand factor antigen is recommended in consultation with a hematologist.
- TSH and Prolactin test is done when clinically indicated

Recommendations on Imaging :

- Ultrasonography is mandatory to differentiate Obstetric & Gynaecological cases. In abnormal uterine bleeding, it is to evaluate uterus, adnexa and endometrial thickness.
- Doppler ultrasonography: In suspected arteriovenous malformation, malignancy cases and to differentiate between fibroid and adenomyomas.
- 3D-USG:For evaluating intra myometrial lesion in selected patients for fibroid mapping
- Saline Infusion Sonography (SIS)- To rule out intracavitary lesion such as mucous or fibroid polyp.
- Hysteroscopy: For diagnosing and to know the character of intrauterine abnormalities.
- MRI- To differentiate between fibroids and adenomyomas and mapping exact location of fibroids while planning conservative surgery and prior to therapeutic embolization for fibroids.
- Vaginal cultures or urine polymerase chain reaction (PCR) tests are obtained if infection is a concern.
- Urinalysis with or without urine culture may be needed for women with urinary symptoms

Once Pregnancy Ruled Out :

PALM-COEIN classification for the etiologies of abnormal uterine bleeding proposed by the

Suggested Treatment Options for Abnormal Uterine Bleeding based on PALM-COEIN	
Etiology	**Treatment**
Polyp	Hysteroscopic surgical removal Multiple polyps or polypoidal endometrium and fertility is not desired– LNG-IUS can be combined with surgical removal
Adenomyosis	LNG-IUS, if LNG IUS is not accepted– GnRH agonists with add back therapy; if it fails OCP, NSAIDs, progestogens
Leiomyoma	Intramural or sub-serosal myomas (grade 2-6) Tranexamic acid or COCs or NSAIDs, LNG-IUS, if treatment fails myomectomy depending on location In women >40 years of age, fertility is not desired, for small fibroids (<4- 5 cm)– medical management followed by hysterectomy Short-term management (up to 6 months)– GnRH agonists with add back therapy followed by myomectomy Long-term management– LNG-IUS Newer medical options: ulipristal acetate or low dose mifepristone, currently not available in India Sub mucosal myoma (grade 0-1) hysteroscopic (<4 cm) or abdominal(open or laparoscopic for > 4 cm)
Malignancy	Atypical endometrial hyperplasia– surgical treatment Continued fertility not desired– hysterectomy Hyperplasia without atypia LNG-IUS followed by oral progestins or PRMs
COEIN	LNG-IUS or tranexamic acid, NSAIDs, followed by COCs or cyclic oral progestins Medical or surgical treatment failed or contraindicated: GnRH agonists with add-back hormone therapy When steroidal and other options unsuitable: Centchroman

International Federation of Gynaecology and Obstetrics (FIGO).

To standardize nomenclature of AUB, a new system known by the acronym PLAM-COEIN

(**P**olyp; **A**denomyosis; **L**eiomyoma; **M**alignancy and **H**yperplasia; **C**oagulopathy; **O**vulatory

Disorders; **E**ndometrial factors; **I**atrogenic; and **N**ot classified) was introduced in 2011 by the

International Federation of Gynecology and Obstetrics (FIGO)[5].

The expert committee considered the recommendations of management from the existing guidelines NICE[6,7], supported by SCOG[8] & ACOG[9].

Endometrial histopathology is recommended in women with AUB (Good Clinical Practice Recommendations) :

- All women above 40 years
- In women < 40 years who have high risk factors for carcinoma endometrium such as irregular bleeding, obesity associated with hypertension, PCOS, diabetes, endometrial thickness > 12 mm, family history of malignancy of ovary/breast/endometrium/colon, use of tamoxifen for HRT or breast cancer, late menopause, HNPCC, AUB unresponsive to medical treatment.
- Endometrial aspiration should be the preferred procedure for obtaining endometrial sample for histopathology.
- In case HPE is inadequate or atrophic, hysteroscopy should be performed to rule out polyps.
- Dilatation and curettage should not be the procedure of choice for endometrial assessment.

Obstetric cases are managed by standard treatment protocol as per diagnosis.

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