

# Abnormal Uterine Bleeding (AUB)

## (Menstrual disorders)

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Abnormal uterine bleeding (AUB) (a term which refers to menstrual bleeding of abnormal quantity, duration, or schedule) is a common gynecologic complaint, accounting for one-third of outpatient visits to gynaecologists.

### **AUB**

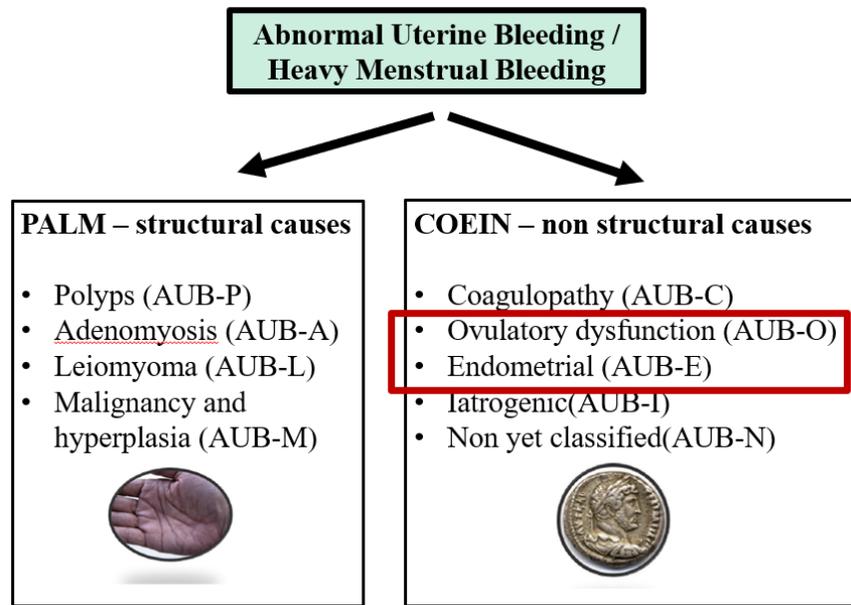
1. DUB – dysfunctional uterine bleeding
2. Non DUB
  - Growths – fibroids, polyps, adenomyosis, malignancy etc
  - Others – endocrine, coagulopathy, etc

**Dysfunctional uterine bleeding (DUB)** is defined as heavy menstrual bleeding, in the absence of recognizable pelvic pathology, pregnancy or general bleeding disorder, which interferes with a woman's physical, social, emotional and/or material quality of life.

Avoid the use of confusing Terminology – such as polymenorrhoea / polymenorrhagia, menometrorrhagia, metrorrhagia, menorrhagia. It is better to describe the menstrual cycles.

A revised terminology system for abnormal uterine bleeding (**AUB**) in nonpregnant reproductive-age women was introduced in 2011 by the International Federation of Gynecology and Obstetrics (FIGO) (*Munro MG, Critchley HO, Broder MS, et al. FIGO classification system (PALM-COEIN) for causes of abnormal uterine bleeding in nonpregnant women of reproductive age. Int J Gynaecol Obstet 2011*)

The classification system is referred to by the acronym PALM-COEIN (polyp, adenomyosis, leiomyoma, malignancy and hyperplasia, coagulopathy, ovulatory dysfunction, endometrial, iatrogenic, and not yet classified). In the PALM-COEIN system, the term **heavy menstrual bleeding (HMB)** replaces the term menorrhagia. In this new classification, the use of the term DUB should be discarded.



About 90% of DUB results from anovulation (**AUB-O** in the new terminology) and 10% occurs with ovulatory cycles (**AUB-E** in the new terminology). In anovulatory cycles, the corpus luteum fails to form, which causes failure of normal cyclical progesterone secretion. This results in continuous unopposed production of oestradiol, which stimulate the overgrowth of the endometrium. Disorders of ovulation may present as amenorrhea, through extremely light and infrequent bleeding, to episodes of unpredictable and extreme HMB requiring medical or surgical intervention. Likely causes of anovulation are – polycystic ovary syndrome, hypothyroidism, hyperprolactinemia, mental stress, obesity, anorexia, weight loss, or extreme exercise.

Ovulatory DUB differs from anovulatory DUB in that ovulation occurs on a regular basis, with regular menses. The heavy bleeding of ovulatory DUB is due to abnormal endometrial environment, with excess production of vasodilatory as opposed to vasoconstrictive prostaglandins. There is also abnormally increased levels of endometrial fibrinolysis.

### Other causes of AUB

1. Local genital tracts – from vulva, vagina, cervix, uterus and fallopian tubes
  - Uterine - DUB
  - Infections
  - Growths – benign, malignant
  - Pregnancy
  - Trauma
  - Caesarean scar defect
2. Medical illness – including bleeding disorders
3. Medications
4. Contraceptives

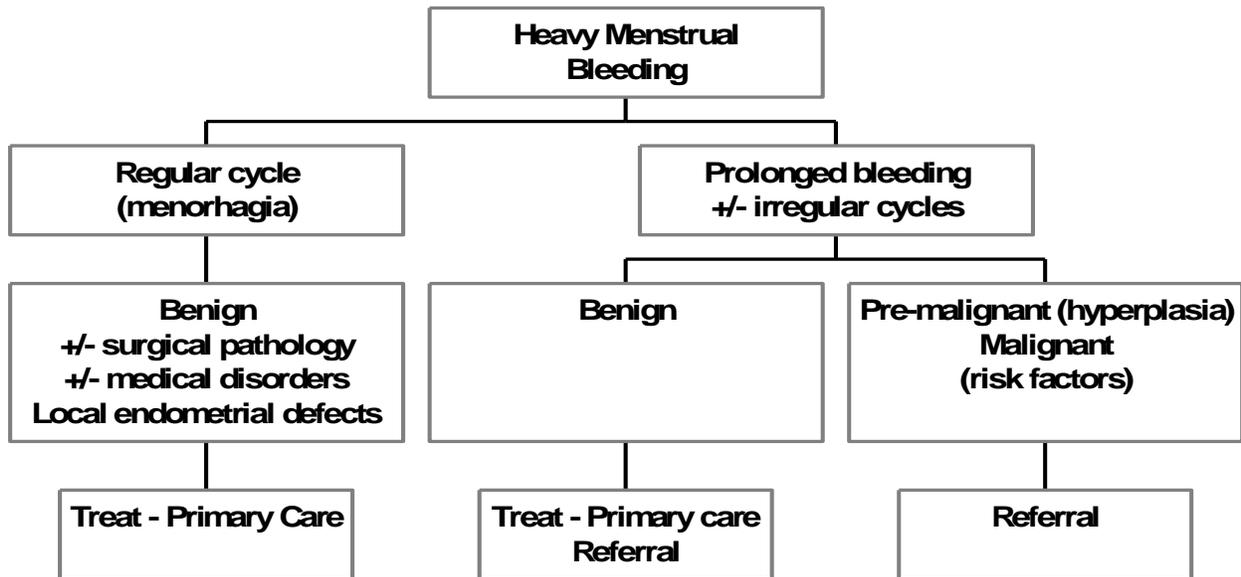
### Risk factors for endometrial cancer

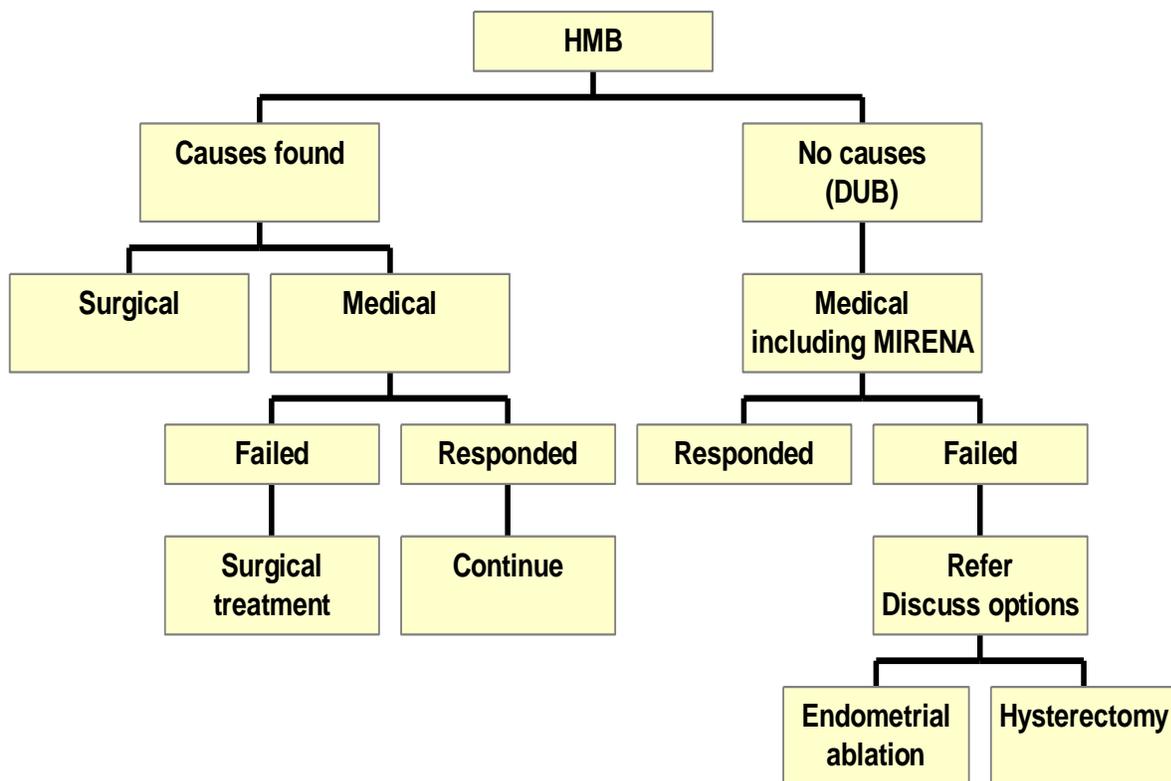
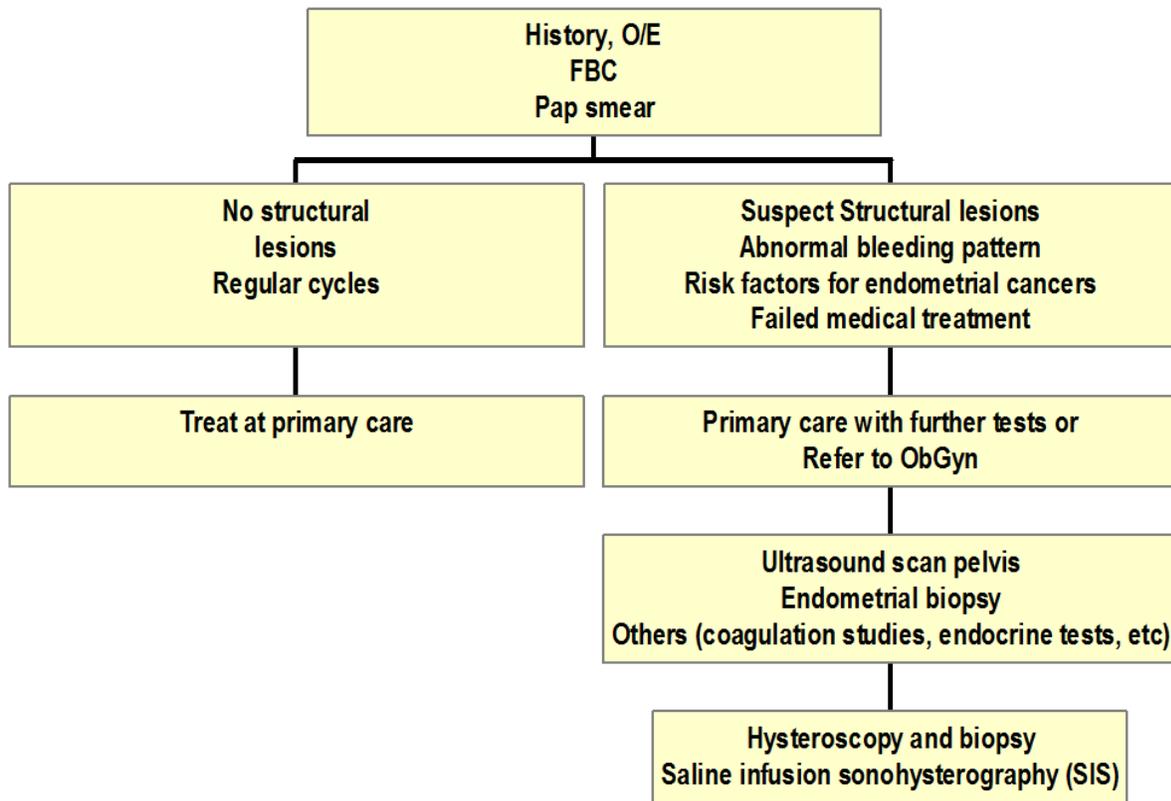
- Age > 35
- Chronic anovulatory cycles
  - PCOS
  - Less than 4 menstrual cycle / year
- Obesity
- Nulliparity
- Diabetes mellitus
- On tamoxifen therapy or unopposed oestrogen
- Family history of endometrial / colon cancer

For those who has risk factors for endometrial cancer, an endometrial biopsy is required when they present with abnormal uterine bleeding. This can be done as an outpatient procedure (e.g pipelle endometrial sampling) or in conjunction with a diagnostic hysteroscopy.

### Treatment

Heavy menstrual bleeding should be treated when it interferes with quality of life or causes anemia.





**A. Ovulatory DUB (AUB – endometrial) – regular cycles but heavy flow**

- I. If need Contraception
  - COC pills – can consider Qlaira® (which has a higher rate of absence of withdrawal bleeding compared to other COC pills). For bicycle or tricycle regime (continuously for 2 or 3 cycles), use only the monophasic pills eg Nordette, Microgynon 30
  - Mirena
  - Injectables progestogen / Implant
- II. No need contraception (single, not sexually active)
  - NSAIDS / Cox-2 inhibitors
  - Tranexamic acid – during menses

**B. Anovulatory DUB (AUB – ovulatory dysfunction) – irregular cycles, prolonged flow, scanty flow, increased interval between flow**

- I. Acute treatment of current prolonged/heavy bleeding episodes
  - Progestogens – high dose for 21 days (20 to 30 mg of dydrogesterone, norethisterone or medroxyprogesterone acetate) or COC pills. Add the following medications in certain conditions:
    - ✓ Tranexamic Acid – prescribe in those with heavy flow, in conjunction with oral progestogen. Use 1 gm tds or qid.
    - ✓ NSAIDS – if has crampy pain

In women with a thickened endometrium, progestogens inhibit further endometrial growth and organize and support the oestrogen-primed endometrium, allowing effective sloughing upon hormone withdrawal. However, if profuse, plus prolonged bleeding has resulted in a denuded endometrium, progestogens are unlikely to be effective. A better option in this situation will be COCs pills. Progestogens are powerful antiestrogen and explain the antimitotic, growth-limiting on the endometrium (prevention and reversal of hyperplasia, arrest of growth during the secretory phase of the cycle). The progestogens may need to be given for several cycles to thin out the endometrium. A lower dose can be prescribed in subsequent cycles.

- II. Long term treatment
  - a) Reduce weight if obese
  - b) Need contraception – same treatment as for ovulatory DUB
  - c) No need contraception
    - Cyclical oral progestogen for 12 days of each calendar month to induce regular withdrawal bleeding. This is suitable for those with reduced numbers of menstrual cycles per year. This type of menstrual pattern is commonly seen in PCOS.
      - ✓ **Dydrogesterone 10 mg daily – first choice for long term use and it is safe even if accidentally taken during pregnancy**
      - ✓ Oral micronized progesterone 200 mg daily
      - ✓ Medroxyprogesterone acetate 10 mg daily
    - COCs pills or Mirena
    - Keen to conceive – ovulation induction with clomiphene citrate

- Perimenopausal period with significant symptoms – use of HRT (with cyclical bleeding)

It is important that women with chronic anovulation with very few menstrual cycles in a year (usually in women with PCOS) should shed their endometrium at least every 3 months. Dydrogesterone 10 mg (Duphaston) can be given for 12 days every 1–3 months to induce a withdrawal bleed. Alternatively, monthly 12 days of dydrogesterone given at the start of each calendar month will help to induce regular shedding. This will help in the long-term treatment of abnormal uterine bleeding, prevention of endometrial hyperplasia and endometrial cancer. Dydrogesterone has higher bioavailability than oral micronized progesterone and is a better choice orally. Norethisterone should be avoided as it is more androgenic and may affect lipids level in long term usage and a concern when pregnancy accidentally occurs while on this medication. No such issues exist with dydrogesterone as it is non-androgenic and licensed to be use in pregnancy as well.

### **Induce menses**

Induce menses – any progestogen can be used but must first ruled out pregnancy.

- Dydrogesterone 10 to 20 mg daily (10 mg daily for 10 days or 10 mg bd for 5 days)
- Utrogestan 200 mg daily for 10 days
- Norethisterone 5 mg bd or tds for 10 days. Easier will be 10 mg bd for 5 days
- medroxyprogesterone acetate 10 mg daily 10 days. Or 10 mg bd for 5 days

This is followed by withdrawal bleeding a few days later (eg 3 to 7 days) after completion of the progestogens. Patients should be informed that if there is still no withdrawal bleeding, they should consult a gynaecologist for further investigations.

### **When to refer?**

- Presence of risk factors for endometrial cancer
- Prolonged bleeding
- Failed medical treatment
- Severe anaemia
- Presence of clinical findings suggestive of surgical pathology – e.g palpable mass (fibroids)
- Postmenopausal bleeding
- Positive investigations – blood tests, ultrasound scan