Abnormal uterine bleeding is one of the most common problems encountered by obstetrician and gynaecologist. It can be defined as any bleeding from the uterus, which is not normal cyclical menstruation. This is more common at the extremes of reproductive years, in the post menarche and perimenopausal period. These may be in the form of menorrhagia, polymenorrhoea, hypomenorrhoea, polymenorrhagia, metrorrhagia, oligomenorrhoea and dysfunctional uterine bleeding (DUB).

The FIGO has suggested a common classification of the causes of AUB in non-gravid women of reproductive age. The proposed classification have 9 main categories, which are arranged according to the acronym PALM-COEIN [pronounced “palm-koin”] shown in Table 1.

<table>
<thead>
<tr>
<th>Causes of AUB</th>
</tr>
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<tbody>
<tr>
<td>Polyp</td>
</tr>
<tr>
<td>Adenomyosis</td>
</tr>
<tr>
<td>Leomyma</td>
</tr>
<tr>
<td>Malignancy and Hyperplasia</td>
</tr>
<tr>
<td>Coagulopathy</td>
</tr>
<tr>
<td>Ovulatory dysfunction</td>
</tr>
<tr>
<td>Endometrial</td>
</tr>
<tr>
<td>Iatrogenic</td>
</tr>
<tr>
<td>Not yet classified</td>
</tr>
</tbody>
</table>

Adopted from FIGO classification system (PALM-COEIN) for causes of abnormal uterine bleeding in nongravid women of reproductive age.

Generally, along with FIGO proposed causes following are responsible for AUB:
- Obesity, thyroid problems, liver disease and renal disease can contribute to abnormal bleeding.
- Exogenous gonadal steroids and IUDs.
- Developmental defect of the uterus like uterine didelphys and bicornuate uterus can cause menorrhagia.
- Pregnancy state
- Infections like pelvic peritonitis, salpingo-oophoritis, and cellulitis tend to cause AUB.
- Chronic symmetrical enlargement of the uterus
- Psychological upsets by influencing hypothalamus and autonomic nervous system, which controls the blood vessels of pelvic organs.

- Active or passive congestion of pelvis causes hypertrophy of the myometrium and endometrium so that uterus can enlarge to 2-6 times the normal size.

For diagnosis a detailed history and gynaecological examination are essential steps. Following investigations are necessary to exclude or identify any pathology:
- Complete blood count
- Thyroid function test
- Coagulation screen specially for Von Willebrand’s disease
- Transvaginal (TVS) and trans abdominal (TA) sonography: TVS is more informative than transabdominal sonography for measurement of the endometrial thickness.
- Cytology (Pap’s smear)

Other special tests are
- Sonohysterography
- Hysterosulpingography
- Magnetic resonance imaging (MRI)
- Hysteroscope
- Endometrial sampling for histopathology
- Pregnancy test

**Treatment**

Aim of the treatment is
- To correct anaemia
- To minimize the blood loss during menstruation.
- To restore endometrial function

To minimize blood loss different hormonal treatment
- a) Progestogens: Norethisterone, Intrauterine progesterone (LNG intrauterine system)
- b) Oestrogen
- c) Combined oestrogen progesterone (OCP)
- d) Danazol
- e) GnRH agonist
- f) Gestrinone
- g) Antiprogestin (RU 486) and Non-hormonal a)
Prostaglandin synthetase inhibitors (PSI) b) Antifibrinolytics c) Ethamsylate are used.

In some cases medical treatment is not feasible or patients do not respond to medical or treatment for elderly patients surgery is the treatment of choice. According to age and parity surgical treatment options are

1. Curettage: It is effective in reproductive aged group women, not effective in elderly women and very restricted use for young adolescent girls.
2. Endometrial ablation: Not applicable for those who needs fertility preservation.
3. Hysterectomy.
4. Other surgeries like myomectomy and polypectomy when myoma or polyp are responsible for AUB.

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References:
1. Munro MG1, Critchey HO, Broder MS, Fraser IS; FIGO Working Group on Menstrual Disorders. FIGO classification system (PALM-COEIN) for causes of abnormal uterine bleeding in nongravid women of reproductive age. Int J Gynaecol Obstet. 2011; 113(1): 3-13