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# Menorrhagia: assessment and management of heavy menstrual bleeding in adolescent girls

**Link to Menorrhagia Algorithm**

## Aim

The aim of this document is to provide an evidence based guideline to assist in the assessment and management of pubertal and post-pubertal girls who present to the Emergency Department with symptoms of menorrhagia.

## Definition of terms

HMB: Heavy Menstrual Bleeding, PT: Prothrombin Time, APTT: Activated partial thromboplastin time, PCOS: Polycystic ovarian syndrome.

## Target Patient Population

Female menstruating patients with symptoms of heavy menstrual bleeding. It does not deal with the management of those children with dysmenorrhoea, pelvic or abdominal pain.

## Target Users

This guide is directed at Emergency Department staff.

## Assessment

Heavy menstrual bleeding is defined as excessive menstrual blood loss which interferes with physical, social, emotional and/or material quality of life (1). Menorrhagia is defined as prolonged or excessive uterine bleeding that occurs at intervals (2).

The most common etiology of heavy menstrual bleeding in adolescents is dysfunctional uterine bleeding due to immaturity of the hypothalamic- pituitary-ovarian axis resulting in unpredictable bleeding and anovulatory cycles (3, 4). Maturation of this axis occurs slowly over the first two years after menarche while anovulatory cycles may persist for up to 5 years (2).

**Differential diagnoses to consider:**

| Endocrine | Haematologic |
|---|---|
| Anovulatory bleeding | Von Willebrand disease |
| Thyroid disorders | Platelet dysfunction |
| Hyperprolactinemia | Idiopathic thrombocytopenic Purpura |
| PCOS | Coagulation defects |

Bleeding disorders can be the underlying cause for heavy menstrual bleeding in a proportion of adolescents (5, 7-10). The incidence in a recent study of 106 adolescents screened age 9-19 was 10.4% overall, with 23% of those with Hb <100 g/L having a bleeding disorder.

## Initial Assessment

**Focused Medical history to identify:**

- Age at menarche: older at menarche more likely to have longer period of anovulatory, heavy irregular cycles
- Length of cycles and length of bleeding in days
- Use of pads/tampons (and size/absorption capacity of those) in 24 hours, passage of clots and soakage of clothes and bedding
- Presence of symptoms from menarche: increased risk of bleeding disorder
- easy bruising, epistaxis, gingival bleeding and postoperative bleeding
- Family History of bleeding disorders, bruising or anaemia
- Impact on quality of life and effect on academic and social activities

**Examination**

- Vital signs- Heart Rate and Blood Pressure including orthostatic variation
- Height and weight
- Signs of anaemia
- Hirsutism or acne as signs of hyper-androgenism
- Bruising or petechiae
- Pubertal staging
- Pelvic Examination is not indicated as it is unlikely to contribute to management and low likelihood of pathology

**Investigations**

***For all patients with symptoms of menorrhagia***:

- Full blood count
- Coagulation Screen
- Group & Save
- Urine bHCG

***If indicated from history and/or physical examination:***

- Thyroid function tests

## Management

The aim of treatment is to prevent morbidity, reverse anaemia and improve quality of life.

**Medication Dosages**

Ibuprofen 10mg/kg max 400mg TDS
Mefenamic acid 500mg TDS >12 years
Tranexamic Acid 1g QDS (500mg QDS if <50 kg)

## Further assessment and management

**GP follow up for**:

- Those discharged from ED with HB >10 as above
- Those with initial abnormal coagulation for repeat

**Referral to haematology OPD if:**

- Coagulation screening tests are abnormal following repeat.
- Screening tests normal but strong clinical suspicion of bleeding disorder.

**Referral to gynaecology if:**

- Persistent abnormal bleeding despite first line treatments.

## Links to useful websites

**http://youngwomenshealth.org/**

## Companion Documents

***Link to Reference list***

***Link to Literature Search Strategy***

***Link to Parent Information Leaflet***