

Approach to Abnormal Uterine Bleeding in Adolescents

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Introduction

- Adolescents menstrual problems
- Abnormal uterine bleeding
- Causes of AUB

Normal Menstrual Cycle in Adolescents

- age of onset
- HPO axis maturation
- in adults

Classification of AUB

- heavy menstrual bleeding (HMB)
- PALM-COEIN
- acute or chronic

Clinical Evaluation

- A challenging and often neglected problem
- Cycle to cycle variability
- Inconsistency in giving information
- Bleeding disorders

Diagnosis

- An accurate history of patient's cycles is the main issue for diagnosis.
- Pregnancy, PCOS, underlying bleeding disorder
- Initial screening

Physical Examination

- tachycardia and orthostatic hypotension
- bruises and petechiae
- pelvic and bimanual examination

Laboratory Evaluation and Imaging

- Complete blood count, blood type, cross match
- Pregnancy test
- PT, PTT, fibrinogen level
- Von Willebrand-ristocetin cofactor activity, von Willebrand antigen and factor VIII
- Testosterone, DHEAS, prolactin
- Neisseria gonorrhoea and Chlamydia trachomatis
- Pelvic imaging

Table 1. Differential diagnosis of abnormal uterine bleeding in adolescents

Endocrine	Medications
Anovulatory bleeding	Anticoagulants
Polycystic ovary syndrome	Depot medroxyprogesterone implants
Thyroid disorders	Intrauterine devices
Hyperprolactinemia	
Bleeding disorders	Trauma
Von Willebrand disease	Foreign bodies
Platelet dysfunction	
Thrombocytopenia	
Clotting factor deficiency	
Pregnancy	
Abortion	
Ectopic pregnancy	
First trimester bleeding	
Gestational trophoblastic disease	
Infections	
Cervicitis	
Endometritis	
Sexually transmitted disease	
Uterine pathologies	
Polyp	
Leiomyoma	
Adenomyosis	
Malignancy	

Management

- Outpatient management and reassurance
- Treatment is required when AUB causes **anemia** or **impairs quality of life**
- Medical / Surgical

Management of Girls with Acute Bleeding

- What is called severe AUB?
- oral contraceptive pills (OCP)
- conjugated estrogen
- blood transfusion
- Platelet transfusion, clotting factors
- maintenance treatment
- consultation with a hematologist
- discharge

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- No NSAID
 - Concomitant use of tranexamic acid and OCP
 - Desmopressin

Failure of first-line medical management

- Even in cases of life threatening bleeding, **procedures such as uterine artery embolization, endometrial ablation and hysterectomy should not be performed**
- **intrauterine balloon insertion**

Management of Girls with Mild or Moderate Bleeding

- Reassurance
- NSAIDs
- Hormonal therapy
- Daily iron treatment

Long-term Management of Girls with Bleeding Disorders

- Diet optimization and iron supplementation
- Hormonal treatments
- LNG-IUD

Conclusion

- AUB at the beginning of the reproductive age
- Evaluation
- Medical therapy