

Gynecologic Work-Up for Heavy Menstrual Bleeding (HMB) in Adolescents and Young Adults

Anovulatory Menstrual Pattern

CBC

Ferritin

TSH, reflex free T4

Prolactin

Hematology Labs*

Hormonal Labs**

Urine HCG‡

Ovulatory Menstrual Pattern‡

CBC/Retic

Ferritin/TIBC

Urine HCG‡

Hematology Labs*

Treatment of HMB§

Hormone Therapy

Tranexamic acid
(preferred)
or
Aminocaproic acid

* If heavy menses, other bleeding symptoms, prior hemorrhage, surgical bleeding, or family history of bleeding symptoms. See “Hematology Work-up for HMB” section

** PCOS work-up if clinical hyperandrogenism or > 2 years from menarche: free and total testosterone, sex hormone binding globulin, DHEA-S, 17-OHP, estradiol

‡ Consider urine testing for cervicitis if sexually active

‡ Ovulatory menstrual cycles:

- Occur every 24-38 days in reproductive years
- Occur every 21-45 days in young menstruators
- Premenstrual symptoms are common

§ Borutzky C, Jaffray J. Diagnosis and Management of Heavy Menstrual Bleeding and Bleeding Disorders in Adolescents. *JAMA Pediatr.* 2020; 174(2):186-194

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Hematology Work-Up for Heavy Menstrual Bleeding (HMB) in Adolescents and Young Adults

Work-Up

CBC, Ferritin

TIBC/iron studies

PT/PTT

Fibrinogen

vWF Ag, vWF R:Co, Factor 8, VWD activity

Type and screen

Thrombin Time

Special consideration: Factor 13, Factor 9, Factor 11 (Ashkenazi descent), Platelet Aggregation, Mixing studies

Diagnosis of IDA and VWD

Low Hgb/Low Retic

Low MCV/High RDW

Low Ferritin/High TIBC

TYPE 1 VWD: VWF level <0.30 IU/ml regardless of bleeding OR VWF level <0.50 IU/ml with abnormal bleeding***

Treatment of HMB and IDA

Hormone Therapy[§]

+/- Tranexamic acid (preferred) or Aminocaproic acid

Oral: FeSO₄ 2 mg/kg QD* OR Parenteral: Single dose IV iron**

IDA: Iron deficiency anemia; VWD: von Willebrand disease

* James PD, et al. ASH ISTH NHF WFH 2021 guidelines on the diagnosis of von Willebrand disease. *Blood Adv.* 2021; 5(1):280–300.

§ See “Gynecology Work-up for HMB” section

** Moretti D, et al. Oral iron supplements increase hepcidin and decrease iron absorption from daily or twice-daily doses in iron-depleted young women. *Blood.* 2015 Oct 22; 126(17).

*** Auerbach M & Deloughery T. Single-dose intravenous iron for iron deficiency: a new paradigm. *Hematology Am Soc Hematol Educ Program.* 2016; (1):57–66.