Chapter 34 – Vaginal Bleeding

Episode Overview:

1) Indicate 12 causes of vaginal bleeding, indicating at which age group each is most common
2) List 6 causes of bleeding in early pregnancy
3) Describe the management of severe third trimester bleeding and post-partum hemorrhage

Wisecracks:

1) List options for managing vaginal bleeding in the non-pregnant patient
2) When would you avoid estrogen products in non-pregnant women with vaginal bleeding

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1) List 12 causes of vaginal bleeding, indicating at what age groups each is more common

Table 34-2 Differential Diagnoses of Vaginal Bleeding by Age in Descending Order of Frequency

	PREPUBERTAL	ADOLESCENT	REPRODUCTIVE	PERIMENOPAUSAL	POSTMENOPAUSAL
Most common	Vaginitis	Anovulation	Pregnancy	Anovulation	Endometrial lesions, including cancer (30%)
	Anovulation	Pregnancy	Anovulation	Uterine leiomyomas	Exogenous hormone use (30%)
	Genital trauma or foreign bodies	Exogenous hormone use	Exogenous hormone use	Cervical and endometrial polyps	Atrophic vaginitis (30%)
		Coagulopathy (von Willebrand's disease, ITP)	Uterine leiomyomas	Thyroid dysfunction	Other tumor: vulvar, vaginal, cervical (10%)
			Cervical and endometrial polyps		
Least common			Thyroid dysfunction		

ITP, idiopathic thrombotic purpura.

- <u>Nonpregnant patients</u>
    - **Ovulatory**
        - Single episode of spotting in between regular menses
    - **Anovulatory**
        - Causes 90% of DUB
            - Leads to an overgrowth of uterine tissue due to excessive estrogen - due to stress, weight loss, exercise.
                - The H-P-A axis is disrupted.
        - Consider:
            - Fibroids
            - Exogenous hormone use
            - Uterine AVM

    - **Non-uterine**
        - Need to consider vulva, vault, vagina, forchette, cervix, urethral, rectal, anal, foreign bodies, genital trauma, cervical polyps

- Acute menorrhagia in ADOLESCENTS
    - 20% of cases due to
        - Von-wilibrand's disease
        - Myeloproliferative disorders (polycythemia vera, CML, thrombocytosis)
        - ITP

- Non uterine causes:
    - Cervix - cancer, polyps, condylomata, OCP use, PID
    - Vagina - lacerations, trauma, tumours,
    - Adnexa - hemorrhagic ovarian cyst, ovarian tumours, PCOS, endometriosis
    - Urinary tract - urethral diverticula, urethral furuncles
    - Anal or rectal causes

2) List 6 causes of bleeding in early pregnancy

- Pregnant patients
    - Before 20 weeks
        - Ectopic
            - Serum BHCG levels
                - False negative rate for
                    - Serum < 0.5% (when 10 mIU/mL used)
                    - Urine < 1% (when 20 mIU/mL used)
                        - Usually 95-100% sensitive and specific for pregnancy
                - The discriminatory level for ectopic pregnancy is 1500-2000 mIU/mL
        - Miscarriage
            - Threatened
            - Inevitable
            - Spontaneous
            - Complete
            - Incomplete
            - Missed
            - Septic
        - Implantation bleeding
        - GI or GU bleeding
        - Trauma
        - Cervical carcinoma
        - **Gestational trophoblastic disease**
            - **Hydatidiform mole or molar pregnancy**

3) Describe the management of severe third trimester bleeding and post-partum hemorrhage

Third trimester

    - After 20 weeks

        - Placental abruption
        - Placental previa / increta / percreta

Post-partum

- Early
    - Uterine atony
        - Prolonged labour, infection, polyhydramnios, multiparity, induced labour, precipitous labour, magnesium therapy, intrauterine injection
    - Uterine trauma (instrumentation)
- Late
    - Uterine atony
        - Prolonged labour, infection, polyhydramnios, multiparity, induced labour, precipitous labour, magnesium therapy, intrauterine injection
    - Retained foreign body
    - Infection
    -

WiseCracks:

1) Outline options for managing vaginal bleeding in the non-pregnant patient?

- MOVIE
- Crystalloids and then RH **Negative** blood until Rh status known
- IF blood in abdomen +/- shocky
    - Consult
        - Gen surg
        - Obs gyne
        - Radiology - IR techniques
    - May need hysterectomy, embolization, and determination of other bleeding sources (in trauma - liver, spleen, etc)

- If < 20 weeks pregnant and not unstable:
    - Determine if os if open (use ring locking forceps to see if it is an inevitable miscarriage)
        - Give Rhogam if mother is ***Rh negative!***

NON-pregnant patients

- Treatment:
    - NSAIDS
    - Tranexamic acid 1 g TID x 7 days
    - Premarin (conjugated ESTROGEN) - IV or IM 25 mg and q 6 hrs prn
        - IF bleeding continues insert foley catheter into cervical os and inflate to tamponade the bleeding
        - Leave in place for 12-24 hrs
    - Birth control pill with at least 35 mcg of estradiol BID until bleeding stops or up to 7 days

2) **When would you avoid estrogen products in non-pregnant women with vaginal bleeding?**

- Contraindications to estrogen use:
    - Thromboembolic events / strokes
    - Estrogen dependent tumour
    - Active liver disease
    - Pregnancy
    -

3) 7 critical causes of vaginal bleeding NOT to miss!

Critical diagnoses NOT to miss!

1. **Ectopic**
2. **Heterotopic (1:40000 - 1:100 (if on fertility treatment))**
3. **Miscarriage**
4. **Placenta previa / accreta**
5. **Placental abruption**
6. **Uterine perforation / rupture / trauma**
7. **Arteriovenous malformation**

- MOVIE
- ABCD's and pregnancy test!
- Bedside ultrasound for IUP and free fluid in abdomen
- Then appropriate systemic analysis of possible bleeding causes
    - pregnancy vs. non-pregnancy
    - Anatomic approach

4) BONUS: What's the incidence of ectopic AND the incidence with an IUD in place? (according to uptodate)

- Ectopic pregnancy in general 2/100 - 2% in GENERAL population
    - But **6-16%** among women who come to the ED with first trimester bleeding, and/or pain
- Ectopic pregnancies as a proportion of all pregnancies based on contraceptive method:
    - Mirena IUD 1:2
        - !!(50% of all pregnancies, IF the woman with an IUD gets pregnant)
    - Copper IUD 1:16
    - Pills 0 - 1:20
    - Tubal sterilize opioid receptors in the gut