APPROACH TO VAGINAL BLEEDING

VAGINAL BLEEDING IS DEFINED TEMPORALLY AS MIDCYCLE (OVULATORY), PREMENSTRUAL, MENSTRUAL AND POST-MENSTRUAL

- Abnormal vaginal bleeding classified on the basis of the duration, amount and frequency of bleeding
- Can occur at all ages and results from any number of causes
- Bleeding in pregnancy significantly increases risk of morbidity and mortality to the mother and foetus

Table 27-1 Definitions of Vaginal Bleeding

Polymenorrhea	Abnormally shortened cycle, with bleeding occurring every 21 days or sooner
Oligomenorrhea	A cycle duration of 35 days or longer
Menorrhagia	Cycle occurs at regular intervals but lasts for more than 7 days and involves the loss of more than 80 mL of blood
Hypomenorrhea	Cycle occurs at regular intervals but has a decrease in monthly blood loss
Intermenstrual bleeding	Bleeding that occurs between regular periods
Metrorrhagia	Bleeding that is frequent and irregular
Menometrorrhagia	When metrorrhagia becomes prolonged
Dysfunctional uterine bleeding	Abnormal vaginal bleeding due to anovulation
Postcoital bleeding	Bleeding after sexual intercourse, suggesting cervical pathology
Postmenopausal bleeding	Any bleeding that occurs more than 6 months after the cessation of menstruation

EPIDEMIOLOGY:

- Non-pregnancy causes classified as OVULATORY, NON-OVULATORY AND NON-UTERINE
- Approximately 20% of all women have vaginal bleeding before 20 weeks and more than 50% of these women spontaneously abort
    - Vaginal bleeding after 20 weeks occurs in 4% pregnancies
        - 30% due to placental abruption, 20% due to placenta praevia
- Most common cause of PPH is uterine atony, but after 24 hours, consider retained products

PATHOPHYSIOLOGY:

- PREGNANT PATIENTS:

- In early pregnancy → think ectopic (especially if assisted reproduction, prior episode, PID/tubal scarring, previous surgery). Also think threatened/inevitable, missed or incomplete abortion.
  - Other causes include cervicitis, cervical ectropion/polyp, implanation bleeding, GI/urinary tract bleeding, cervical carcinoma
- DIFFERENTIATION OF MISCARRIAGE/ABORTION:
  - Threatened → bleeding of intrauterine origin prior to 20 weeks with/without contractions with CLOSED CERVIX and without expulsion of products of conception
  - Complete → expulsion of all products, incomplete → some
  - Inevitable → bleeding with dilatation of the cervix without expulsion of the products
  - Missed → embryo/foetus dies but products are retained
  - Septic → infection of the uterus
- PLACENTAL ABRUPTION:
  - Can occur spontaneously or secondary to trauma
  - ↑d incidence with:
    - HELLP
    - HT
    - Cocaine use
    - Preeclampsia
    - Smoking
    - Increased maternal age
    - Abnormal placental implantation → praevia, accreta, increta or percreta
- UTERINE ATONY:
  - More likely with polyhydramnios, multiparity, prolonged labour, induced labour, precipitous labour, intrauterine infection (chorioamnioitis), magnesium therapy

- NON-PREGNANT PATIENTS:
  - Pathophysiology varies with age-group:

Table 27-2 Causes 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)	Uterine leiomyomas	Thyroid dysfunction	Other tumor: vulvar, vaginal, cervical (10%)
			Cervical and endometrial polyps		
Least common			Thyroid dysfunction		

PIVOTAL FINDINGS:

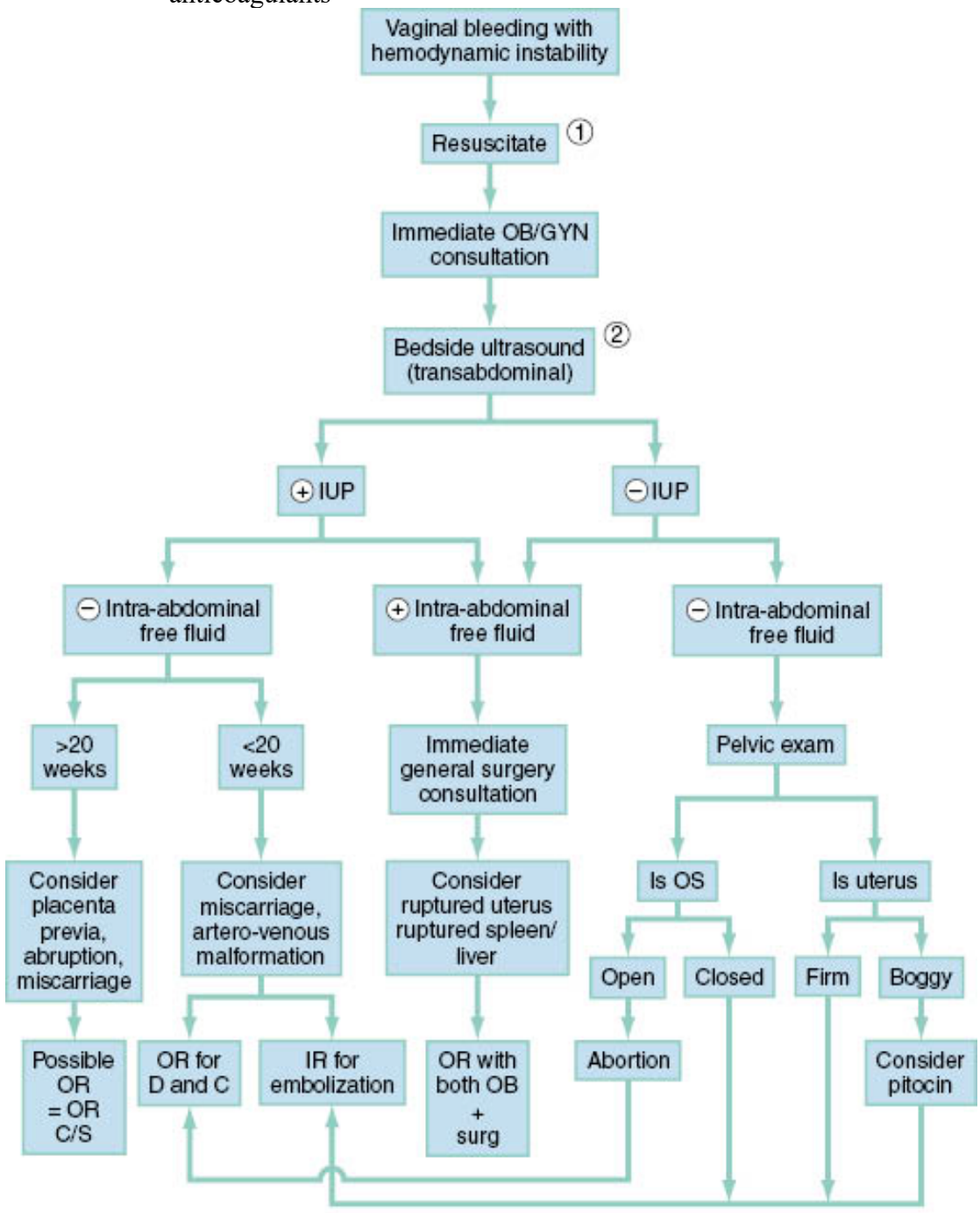
- SYMPTOMS:
  - Volume, duration, timing of bleeding should be ascertain
  - Average tampon or pad absorbs 20-30mL of vaginal effluent → but number used is unreliable

    - Bleeding during or after intercourse may indicate a cervical lesion and is more common during pregnancy
    - During active labour → history of prior LSCS, cocaine abuse or high dose oxytocin raises index of suspicion for UTERINE RUPTURE
    - In absence of pregnancy → vaginal discharge, pelvic pain and fever may suggest PID
- SIGNS:
    - In pregnant patient → fundal height, FHR, US to assess for praevia/ectopic (depending on gestational age)
- ANCILLARY TESTING:
    - BETA HCG:
        - Discriminatory level is 1500-2000 IU/mL → below this level with no evidence of intrauterine pregnancy on TV US → ectopic and IUP are still a possibility → above this level, ectopic pregnancy is diagnosed by absence of IUP on TV US
        - In patients with minimal symptoms who are below this level → serial HCG can distinguish ectopic from IUP/spontaneous abortion

EMPIRICAL MANAGEMENT:

- **PREGNANT PATIENTS:**
    - If ectopic is suspected and serum HCG is positive and the patient is unstable → immediate surgical involvement
    - If shock/PV bleeding present >20 weeks → immediate US to evaluate placenta abruptio/praevia →O&G involved early → no TV until praevia excluded
        - If bleeding in third trimester → LSCS indicated if → foetal distress, severe abruption with viable foetus, life-threatening haemorrhage, patient has failed trial of labour
    - Uterine rupture → excessive vaginal bleeding, uterine pain and change in abdominal contour (soft horizontal lump below hard fundus → expanding haematoma and retracting uterus)
    - Painless vaginal bleeding with rupture of membranes classically suggests VASA PRAEVIA → indicates foetal bleeding and requires emergent LSCS
    - If after delivery the placenta adheres abnormally and has difficulty separating, think PLACENTA ACCRETA → emergent hysterectomy
    - Uterine atony responds to vigour uterine massage and IV oxytocin
    - INDICATIONS FOR ANTI-D:
        - All Rh-negative women in all documented first-trimester miscarriage/ectopic
- **NON-PREGNANT PATIENTS:**
    - Bleeding may be under ovulatory control or related to anovulatory dysfunctional uterine bleeding
        - NSAIDS are mainstay of treatment for both conditions
        - If unstable → consider IV oestrogen (PREMARIN) 25mg and then insertion of foley catheter into cervical os to tamponade bleeding
        - Outpatient treatment with OCP can arrest bleeding with gynae input if necessary

- Consider medical causes → hypothyroidism, haemostatic disorders, anticoagulants



① Consider immediate transfusion with RH negative blood products

② Transvaginal ultrasound is ideal for diagnosis but may not be available at bedside for unstable patients