

Mutah university

post partum care

Presented by :
Toqa Alqatatsheh
Ayman Eyad
Obayda hussam
Duha Al-Tarawneh
Batool nizar



Supervised by:
Dr. Suad Aljaafreh

Post partum care



The postpartum period

also known as the puerperium and the "fourth trimester," refers to the time after birth when the physiologic changes related to pregnancy return to the nonpregnant state.

It's start immediately after delivery and extend up to 6 - 8 weeks post delivery .

POSTPARTUM FINDINGS AND CHANGES

Shivering

it may be a response to a fall in body temperature following labor, fetal-maternal bleeding, micro-amniotic emboli, placental separation, anesthesia, bacteremia, or administration of certain drugs (eg, misoprostol).

Physiologic weight loss

The mean weight loss from expulsion of the fetus, placenta, and amniotic fluid is 13 pounds (6 kg) Approximately one-half of gestational weight gain is lost in the first six weeks after birth

Thyroid volume

increases by approximately 30% during pregnancy and this returns to normal over a 12-week period.

T3 , T4 , return to normal within 4 weeks after

Skin and hair

Striae, if present, fade from red to silvery but are permanent.

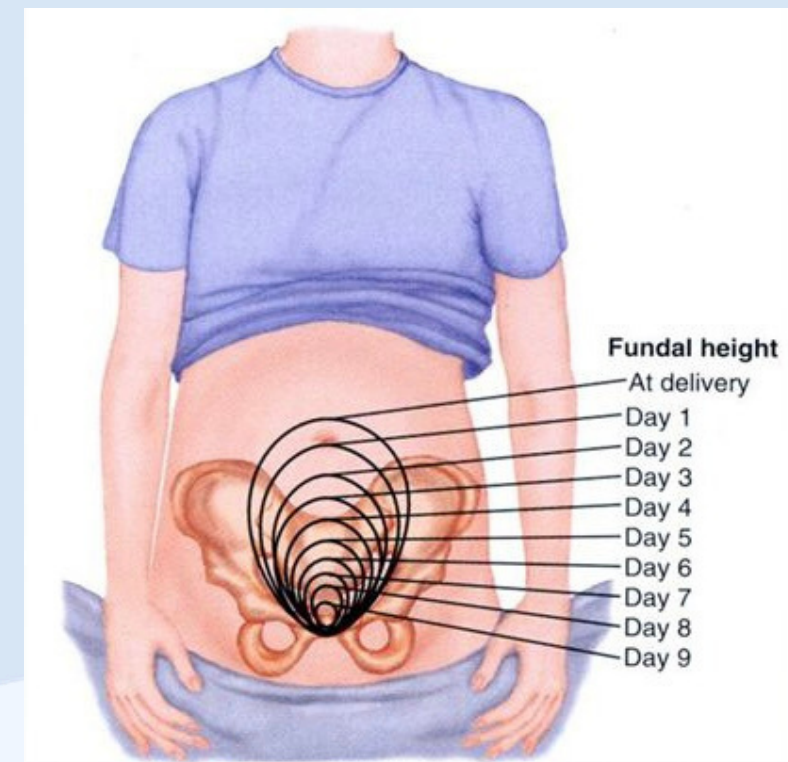
Telogen effluvium is the hair loss commonly noted one to five months after giving birth. It is usually self-limited with restoration of normal hair patterns by 6 to 15 months postpartum.

Uterine involution

return of the uterus to its pre-pregnancy size and condition, which begins immediately after expulsion of the placenta with contractions of the uterine smooth muscle.

The weight of the uterus immediately after the delivery will be decrease from approximately 1000g and after one week it will be 500g , in two week post delivery the uterus weight 300g, until it become 60g after 6 -8weeks.

****Uterine height:** Directly after delivery the uterine level will be at the level of umbilicus .



The rate of involution : 1 cm per day.

*One week post delivery fundal height will be midway between umbilicus and symphysis pubis.

*after two week the uterus returns to pelvic cavity .

• > This process is modestly affected by predelivery overdistention, multiparity, and cesarean birth (the uterus is larger in these cases), and by breastfeeding (the uterus is slightly smaller at three months postpartum in breastfeeding individuals).

sub-involution :the rate of involution is less than 1 cm ,most commonly due to retained placental part .

If uterine involution doesn't occur properly another serious complication might develop which is PPH as there is no effective contraction(uterine Antony) to stop bleeding so the uterus will not decent down and upon palpation it appear to be soft boggy uterus normally the consistency should be firm, non-tender, globular.

After pain

Uterine contractions that continue following delivery. To Stop the bleeding from the area where the placenta was attached.

- **Characteristic of after pain:**

- ☐ Occur during the 1st **2-3 days** of puerperium
- ☐ **Abdominal pains** (like cramps) and back pain.
- ☐ **Strong**, regular, and coordinated.
- ☐ The intensity, frequency, and regularity of contraction **decrease** after the 1st postpartum day.
- ☐ **More severe in breastfeeding mothers** and multiparas women
- ☐ May require analgesia for pain relief (like ibuprofen).
- ☐ More spacing between children reduces these pains.

Lochia

- ❑ Lochia is the **uterine discharge that is comprised of blood and necrotic decidua**.
- ❑ The basal portion of the decidua remains after the placenta separates. This decidua divides into **two layers**:
The **superficial** layer is shed and the **deep** layer regenerates new endometrium, which covers the entire endometrial cavity by the 16th postpartum day.
- ❑ Lochia will mostly smell like menstrual blood. Some describe it as earthy. However, foul or strongly unpleasant smell can be a sign of infection and it should be evaluated
- ❑ **Microscopically**, lochia consists of serous exudate, erythrocytes, leukocytes, decidua, epithelial cells, and bacteria.

So why Lochia happen , after placental delivery the progesterone level drop ,which is responsible for support the decidua and due to that shedding of decidua occur .

Lochia **Rubra**:

- Lasts for the **first 3-4 days** post-delivery.
- Bright red discharge due to high blood content and small clots.
- Moderate to heavy flow, similar to a menstrual period.

Lochia **Serosa**:

- lasts for **2-3 weeks** post-delivery.
Pinkish-brown discharge as the amount of blood decreases and the proportion of mucus and leukocytes increases.
- Lighter flow than in the rubra stage.

Lochia **Alba**:

- lasts up to **6 weeks** postpartum.
Whitish or yellowish-white discharge, consisting mainly of mucus and leukocytes.
Much lighter flow.

Lochia

- > The endometrium will proliferate from the basal layers of the decidua but this is influenced by the method of infant feeding. If lactation is suppressed, the uterine cavity may be covered by new endometrium within 3–4 weeks; however, if lactation is established, endometrial growth in the majority of women may be suppressed for as long as breastfeeding continues.
- > This is because lactation suppresses ovarian function and so a physiological hypo-estrogenic state is created that prevents endometrial cell growth.

Perineal tear

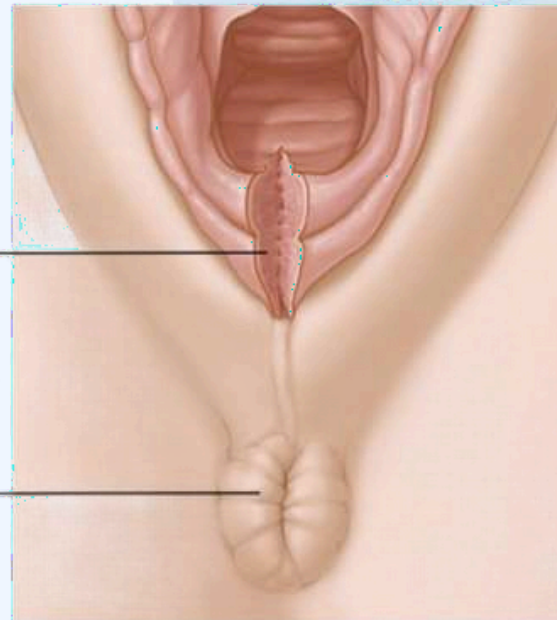
Definition :

- A perineal tear is an injury to the perineum, the area between the vaginal opening and the anus, that occurs during childbirth.
- These tears can vary in severity from minor lacerations involving only the skin to more severe tears extending into the muscles and tissues.

1st Degree

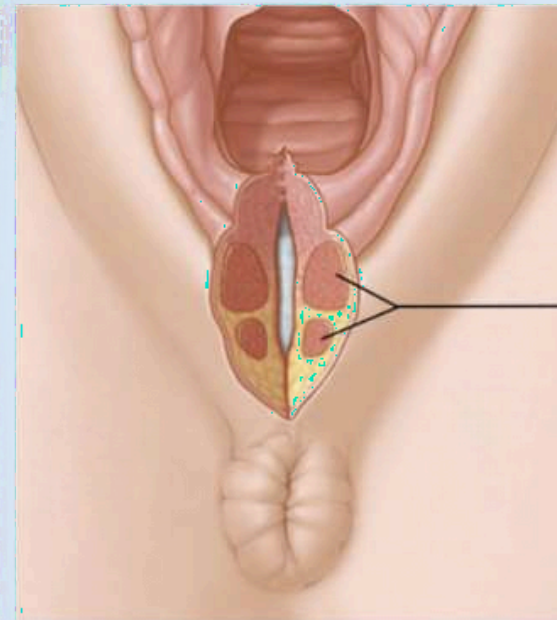
Vaginal
mucosa
torn

Anus



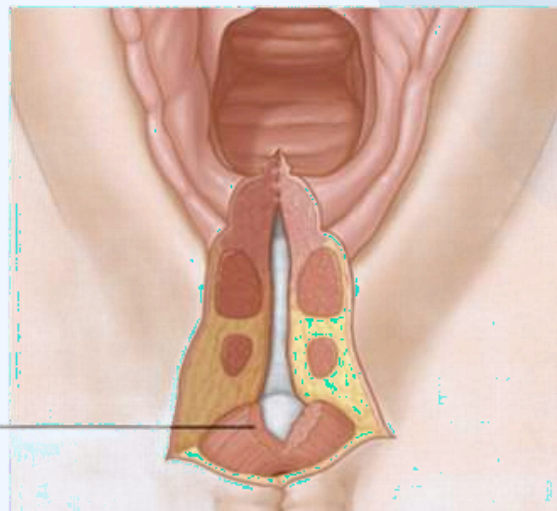
2nd Degree

Perineal
muscles
torn



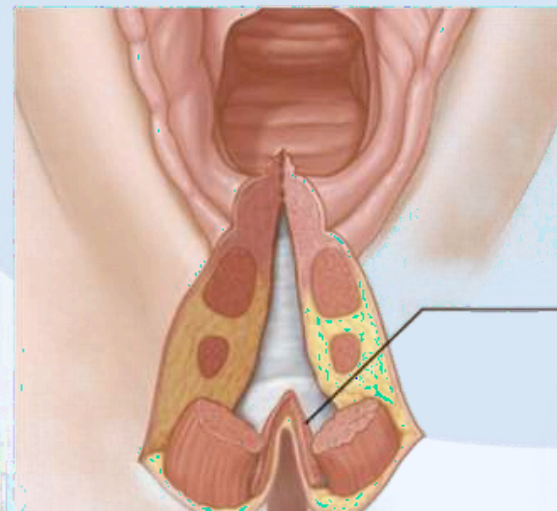
3rd Degree

Anal
sphincter
torn



4th Degree

Rectum
torn



Perineal tear exam

Procedure

- 1. Timing:** Perform the exam immediately after delivery and at subsequent postpartum check-ups.
- 2. Patient Position:** Position the patient in a comfortable lithotomy or side-lying position.
- 3. Visual Inspection:** Look for signs of swelling, bruising, hematomas, and tears.
- 4. Palpation:** Gently palpate the perineum to assess for tenderness and integrity of the tissue.
- 5. Classification of Tears:**
 - **First Degree:** Involves only the vaginal mucosa and perineal skin.
 - **Second Degree:** Extends into the perineal muscles.
 - **Third Degree:** Extends through the perineal muscles and involves the anal sphincter.
 - **Fourth Degree:** Extends through the anal sphincter and involves the rectal mucosa.

Documentation

Record the findings accurately, noting the degree and extent of any tears.



Perineum care for all post partum women

Importance

All women, regardless of whether they have perineal tears, need proper perineum care after childbirth. Helps in reducing discomfort, promoting healing, and preventing infections.

General Care Practices :

- **Cold Therapy:** Apply ice packs to reduce swelling and pain in the first 24 hours.
- **Hygiene:** Cleanse with warm water, avoiding harsh soaps.
- **Pain Management:** Use analgesics as needed.
- **Sitz Baths:** Encourage use 2–3 times a day for comfort and healing.
- **Perineal Pads:** Change frequently to keep the area dry and clean.
- **Wiping Technique:** Wipe from front to back to prevent infection.
- **Kegel Exercises:** Strengthen pelvic floor muscles.

Postpartum hemorrhage (PPH)

Postpartum hemorrhage is a major cause of maternal morbidity and mortality accounting for 25% of maternal deaths worldwide

PPH is defined as:

- **Blood loss ≥ 500 cc after normal vaginal delivery**
- **>1000 cc blood loss after cesarean section or •
 >1500 cc blood loss after elective CS**
- **hysterectomy**
- **>3000 - 3500 cc for emergent Cesarean hysterectomy**
- **ACOG 10% drop in hematocrit value between admission & PP period, or a need for blood transfusion**

Classification of PPH

- **Primary: Blood loss within 1st 24 hours to delivery. (EARLY)**
- **Secondary: Blood loss from 24 hours to 12 weeks postpartum. (LATE)**

The commonest cause of secondary postpartum hemorrhage is Endometritis

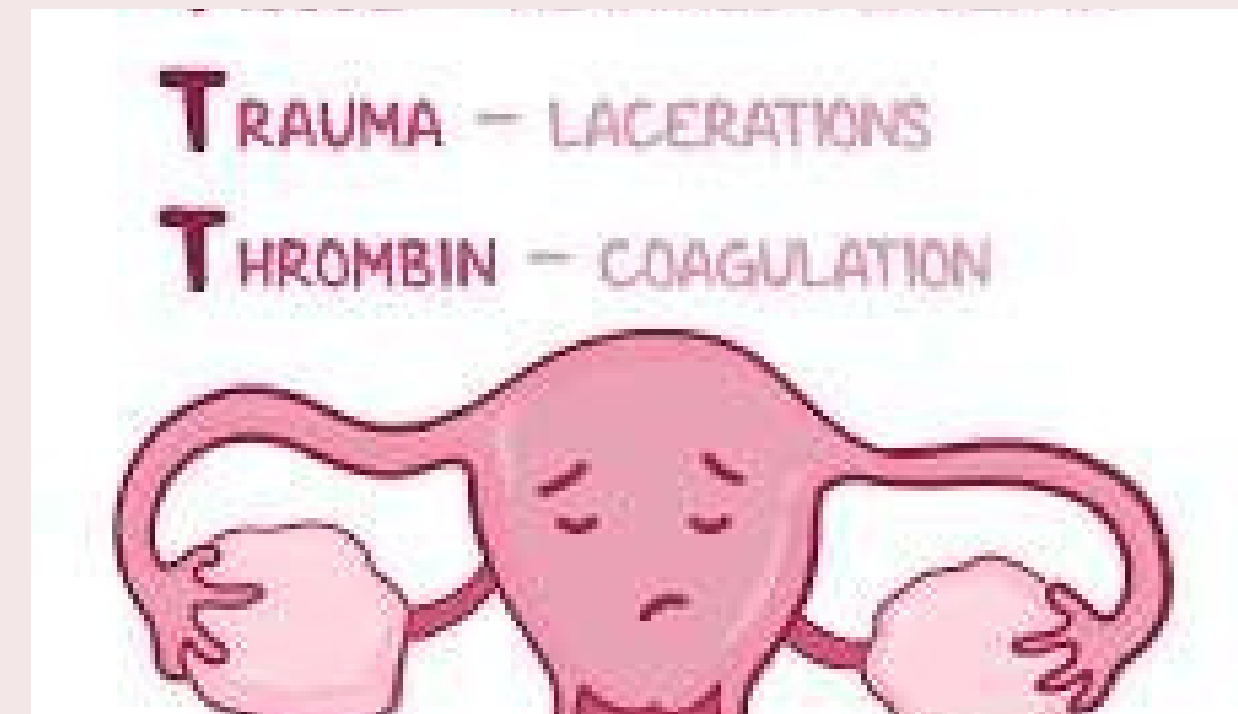
Causes of Primary Post Partum Hemorrhage

Uterine (90 %)

1. **Uterine atony (70-80%)**
2. **Abnormal placental separation:
Retained placental products
, Abnormal placentation**
3. **Uterine rupture**
4. **Uterine inversion**

Non-uterine (10%)

1. **Lower genital tract lacerations**
2. **Pelvic hematomas**
3. **Coagulation disorders**



Breast examination

1. Wash your hands/hygiene

1. Ensure good light & privacy.
2. Introduce yourself to the patient and briefly explain what the examination will involve.
3. Gain consent to proceed with the examination.
4. Ask for the need for a chaperone.
5. Position the patient sitting upright on the side of the bed.
6. Adequately expose the patient's breasts
7. Ask if the patient has any pain before proceeding.

Inspection

With the patient sitting on the side of the bed

-Inspect the breasts looking for:

- **Scars: these may indicate previous breast surgery** · **Asymmetry** · **Masses: note any visible lumps** · **Nipple abnormalities: these can include nipple inversion and discharge (describe its color, consistency, and volume).**
- **Skin changes: including scaling, erythema, peau d'orange.**

Breast palpation

Position: lying down at 45°.

- 1. palpation of the asymptomatic breast first and then repeat all examination steps on the contralateral breast.**
- **A systematic approach to palpation is essential to ensure all areas of the breast are examined. For example: divide the breast into quadrants and examine each thoroughly or begin palpation at the nipple and work outwards in a concentric circular motion. Breast examination**
- **- If a mass is detected, assess the following characteristics: Location/ Size / Shape / Consistency / Mobility / Fluctuance / Overlying skin changes.**
- 1. 2. Palpate each axillary tail**

palpation of lymph nodes

Axillary lymph nodes

Breastfeeding

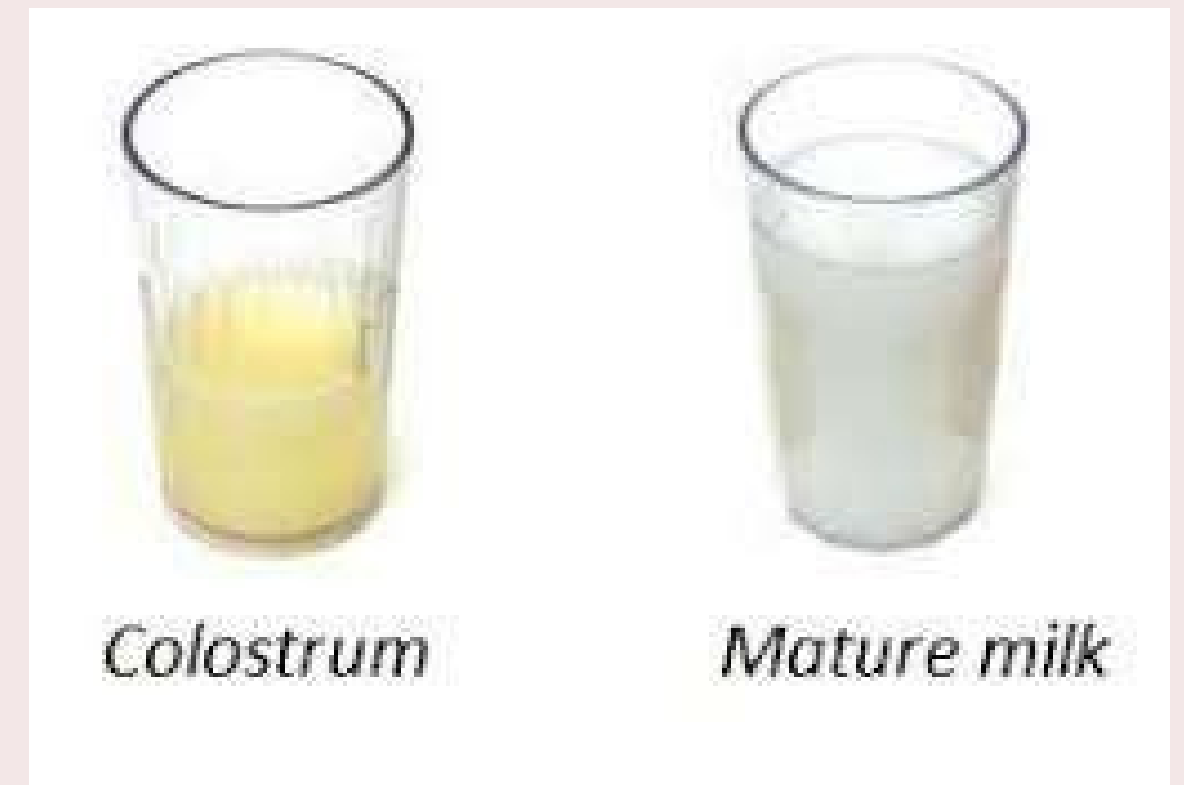


Physiology of lactation

- At puberty, the milk ducts that lead from the nipple to the secretory alveoli are stimulated by oestrogen to sprout, branch and form glandular tissue buds from which milk-secreting glands will develop.
- During pregnancy, breast tissue is further stimulated so that pre-existing alveolar–lobular structures hypertrophy and new ones are formed.
- At the same time milk-collecting ducts also undergo branching and proliferation. Both oestrogen and progesterone are necessary for mammary development in pregnancy but prolactin, growth hormone and adrenal steroids may also be involved.
- During pregnancy only minimal amounts of milk are formed in the breast despite high levels of the lactogenic hormones prolactin and placental lactogen. This is because the actions of these lactogenic hormones are inhibited by the secretion of high levels of oestrogen and progesterone from the placenta and it is not until after delivery that copious milk production is induced.

Colostrum

- Colostrum is a yellowish fluid secreted by the breast that can be expressed as early as the 16th week of pregnancy, but is replaced by milk during the second postpartum day.
- Colostrum has a high concentration of proteins (immunoglobulin (Ig) A, which plays an important role in protection against infection).
- It also contains large fat globules (but contains less sugar and fat than breast milk).
- Colostrum is believed to have a laxative effect, which may help empty the baby's bowel of meconium.



Breast milk

- **The major constituents of breast milk are lactose, protein, fat and water. However, the composition of breast milk is not constant.**
- **Lactalbumin is the major protein in breast milk.**
- **In addition to IgA, breast milk contains small amounts of IgM and IgG and other factors such as lactoferrin, macrophages, complement and lysozymes.**

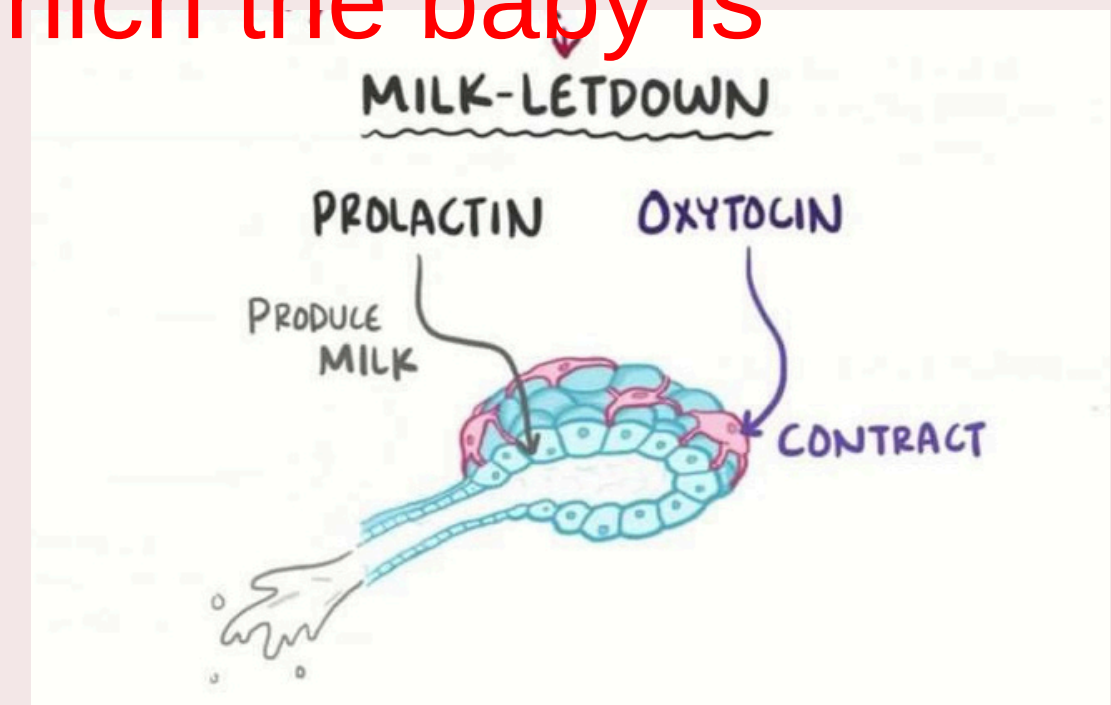
Milk ejection reflex

Successful breastfeeding depends as much on effective milk transfer from the breast to the baby as on adequate milk secretion.

The milk ejection reflex is the release of **oxytocin** from the **posterior pituitary gland** . **Oxytocin** causes contraction of the sensitive myoepithelial cells that are situated around the milk-secreting glands and also dilates the ducts by acting on the muscle cells that lie longitudinally in the duct walls.

Contraction of these cells therefore has the dual effect of expelling milk from the glands and of encouraging free flow of milk along dilated ducts.

This is recognized by the mother as milk ‘ **let-down**’ and she may be aware of milk being ejected from the opposite breast from which the baby is suckling.



- **The milk ejection reflex is readily inhibited by emotional stress and this may explain why maternal anxiety frequently leads to failure of lactation.**
- **Successful breastfeeding depends on engendering confidence in the mother and ensuring correct fixing and suckling on the nipple.**
- **Another factor that is of potential physiological importance as an inhibitor of breast milk is: when the milk is not effectively stripped from the breast at each feed, this will inhibit lactopoiesis and lead to a fall in milk production.**

Mechanisms of lactational amenorrhoea

- **The key event is a suckling-induced change in the hypothalamic sensitivity to the feedback effects of ovarian steroids.**
- **During lactation, the hypothalamus becomes more sensitive to the negative feedback effects and less sensitive to the positive feedback effects of estrogen.**
- **This means that if the pituitary secretes enough follicle-stimulating hormone to initiate the development of an ovarian follicle, the consequent oestrogen and inhibin secretion will inhibit gonadotrophin production and the follicle will fail to mature.**
- **From a clinical standpoint, the major factor is the frequency and duration of the suckling stimulus, although other factors such as maternal weight and diet may be important confounding factors.**
- **If supplementary food is introduced at an early stage, the suckling stimulus will fall and early ovulation and a return to fertility.**

Non-breastfeeding mothers

- Non-breastfeeding mothers may suffer considerable engorgement and breast pain.
- Dopamine receptor stimulants, such as **bromocriptine** and **cabergoline**, inhibit prolactin and thus suppress lactation. However, both commonly cause drowsiness, hypotension, headache and gastrointestinal side-effects.
- Furthermore, fluid restriction and a tight brassiere have been shown to be as effective as bromocriptine usage by the second week and therefore this is the method of choice for the suppression of lactation.

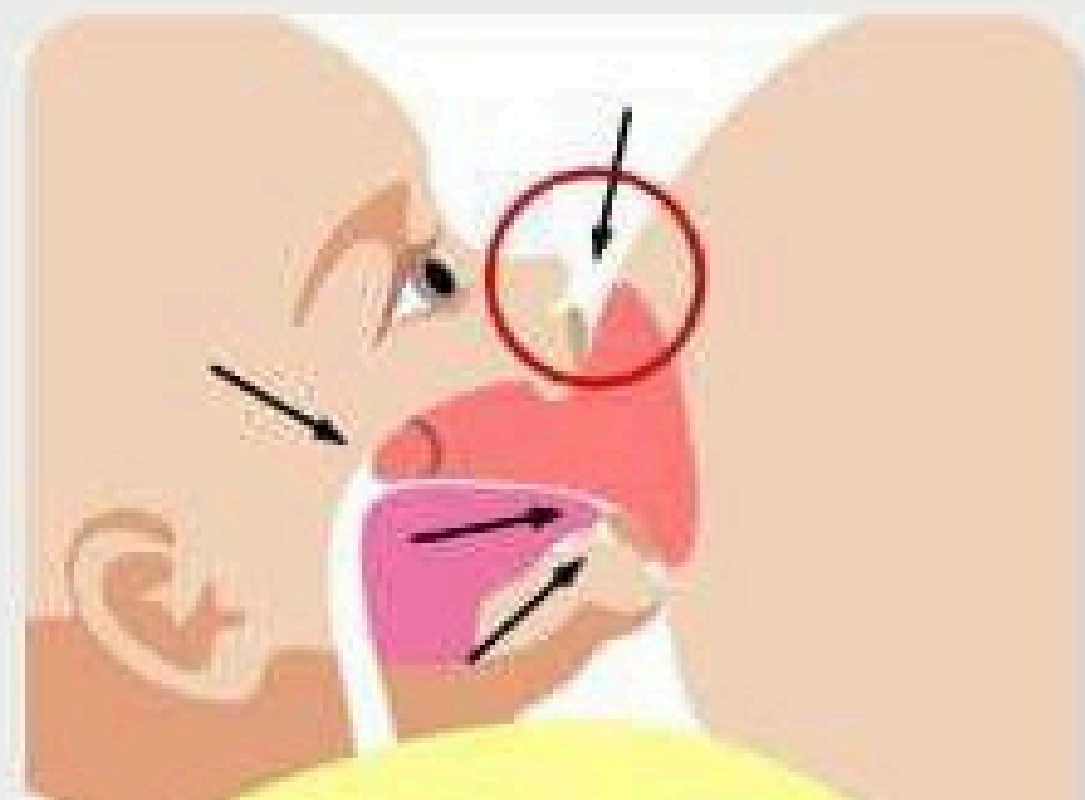
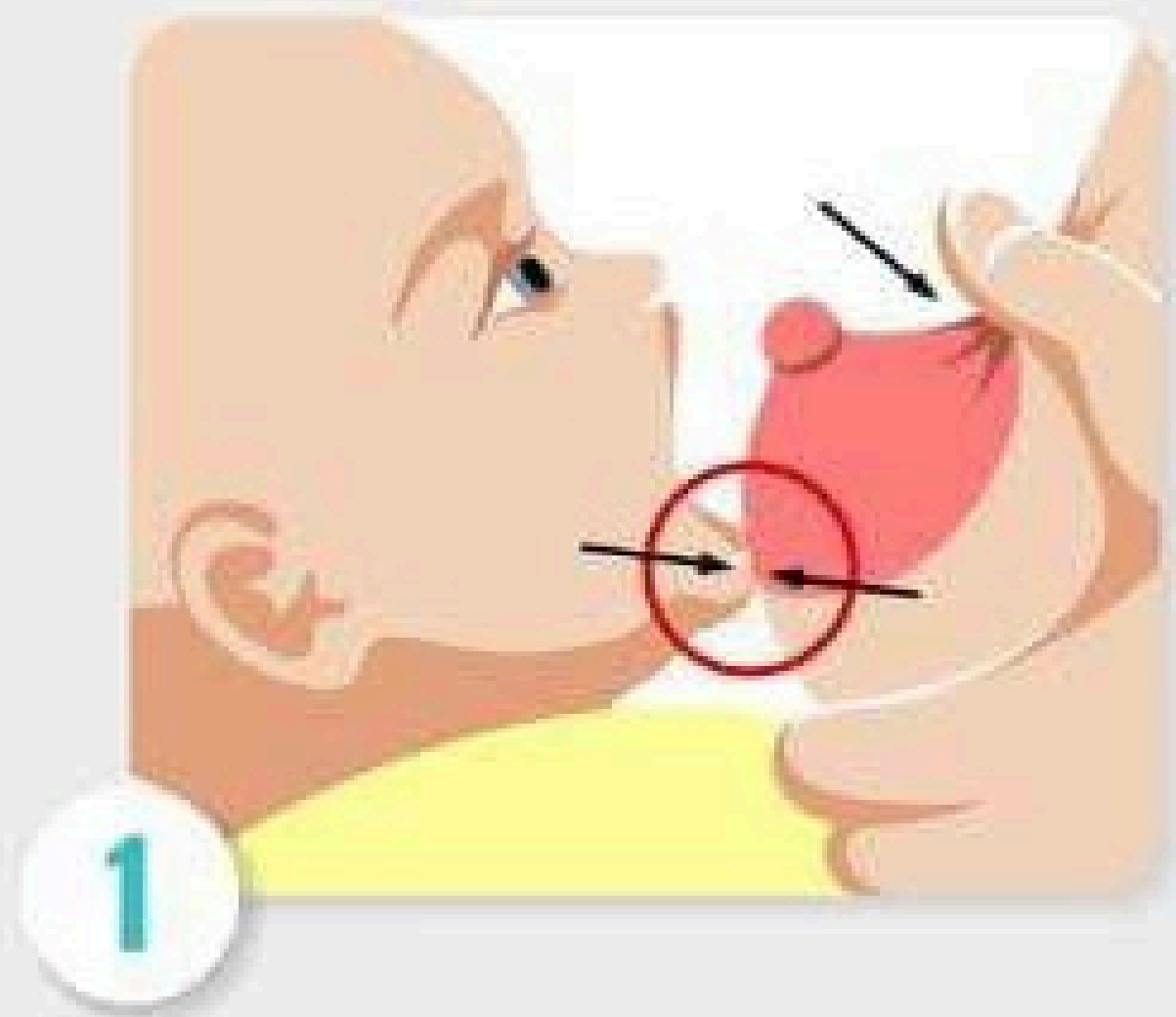
Breastfeeding offers numerous benefits for both the baby and the mother :

For the Baby:

- 1. Optimal Nutrition:** Breast milk provides the perfect balance of nutrients for infants, including proteins, fats, vitamins, and minerals.
- 2. Immune Protection:** It contains antibodies and other immunological factors that help protect the baby against infections and diseases.
- 3. Digestive Health:** Breast milk is easier for babies to digest compared to formula.
- 4. Reduced Risk of Diseases:** Breastfed babies have a lower risk of developing ear infections,.

For the Mother:

- 1. Bonding:** The act of breastfeeding enhances the emotional bond between mother and baby.
- 2. Postpartum Recovery:** Breastfeeding helps the uterus contract and return to its pre-pregnancy size more quickly, reducing postpartum bleeding.
- 3. Lower Risk of Certain Cancers:** Breastfeeding is linked to a reduced risk of breast and ovarian cancers.
- 4. Convenience and Cost-Effective:** Breast milk is always available, at the right temperature, and free, which can reduce the costs associated with infant feeding



contraception

- **Sterilization can be offered to mothers who are certain that they have completed their family**
- **breast feeding: fully breastfeeding her baby has a less than 2% chance of conceiving in the first 6 months**
- **Barriers**
- **IUCD (it is best to wait for 4–8 weeks to allow for involution)**
- **Progestosterone only pills**
- **Injectable contraception**

Postpartum contraception

Lactational amenorrhea (Full breast feeding) may prevent pregnancy in 90-95% of women.

- Breast feeding : Since ovulation rarely occur before 6 weeks after delivery start , so contraception is commenced 6 weeks post partum (mini-pill (POP) or insert IUCD 6 weeks after delivery).**
- In non breast feeders : Since ovulation may occur 3 weeks after delivery so start contraception as early as 3 weeks postpartum (COC or insert IUCD 3 weeks after delivery).**
- After miscarriage : Ovulation most likely to occur within 2-3 weeks, so contraception should be commenced before discharging patient from hospital.**

Breast engorgement

It is swelling, tightness, and an increase in size of the breasts. It usually occurs in the early days of breastfeeding, between day 3 and 5, but may occur as late as day 9-10

Breast engorgement may give rise to puerperal fever of up to 39°C in 13% of mothers, however other infective causes must be excluded .

Primary cause : congestion of fluid and blood in the breast

Secondary cause : mismatch between milk production and milk removal

Treatment :

- manual expression, firm support, applying an ice bag and an electric breast pump, warm compresses before feeding to enhance let-down and facilitate milk removal
- mild analgesics such as acetaminophen, ibuprofen
- In women who are not breastfeeding, the use of a tight bra and avoidance of breast stimulation

Mastitis

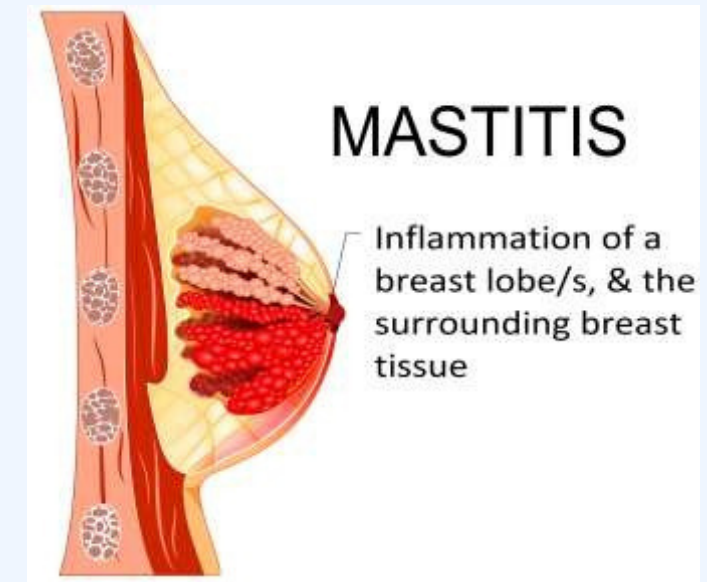
- **Mastitis means inflammation of the breast, and may be non-infectious or infectious in origin. In lactating women, it is essentially caused by an accumulation of milk.**

Epidemiolog

- Worldwide up to 20% of breastfeeding women develop lactation mastitis.

Etiology

- **Puerperal mastitis** may or may not be associated with infection.
- **Non-infectious mastitis is due to an accumulation of milk causing an inflammatory response in the breast.**
- **Infectious mastitis occurs when accumulated milk allows bacteria to grow. The usual infecting organism is *Staphylococcus aureus*, although it may also be *Staphylococcus albus* and streptococci..**
- **Infectious mastitis may lead to a breast abscess.**



Mastitis

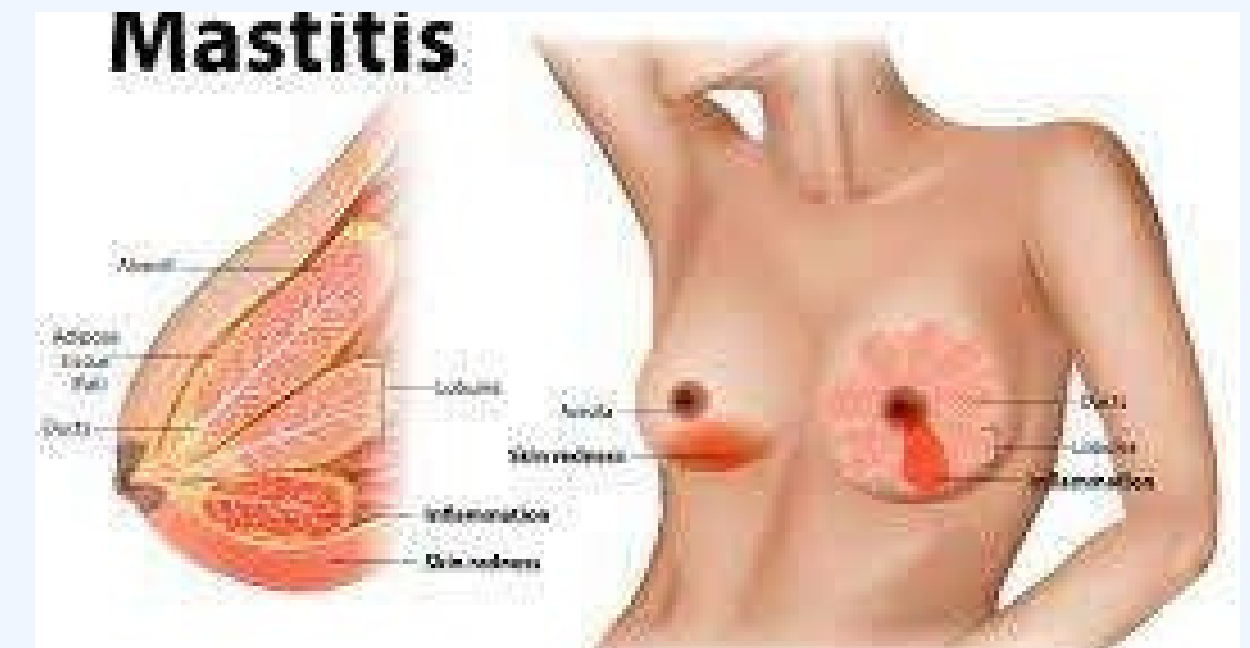
- Presentation (breast pain, swelling, warmth and redness)
- Mastitis is diagnosed based on clinical symptom

Symptoms :

- This normally presents ≥ 1 week postpartum, usually in only one breast. The area affected is tender, and
- Systemic symptoms include fever, rigors, muscle pain, lethargy, depression, nausea and
- It should be distinguished from (breast engorgement) which usually presents on the second or third day of breastfeeding. The complaint in this case is of swollen and tender breasts bilaterally.

Signs :

- Breast examination reveals unilateral oedema, erythema, and tenderness. The affected area feels firm and hot.
- There may be fever.
- If a breast abscess has developed, there will be a fluctuant tender lump, with overlying erythema.



Investigation :

- CBC
- Breast milk culture
- Polymerase chain reaction

Management :

First-line management :

- Encourage the woman to continue breastfeeding
- Improve milk removal (**This may involve**) :
- Assessment of breastfeeding technique.
- an appropriately Manual expression of milk to empty the breast after feeding.
- Self-massage of the breast before feeding or expression, or application of heat by warm compresses, shower or heat packs.
- Increasing feeding frequency.
- Feeding on the affected side.

- Analgesia : Paracetamol or ibuprofen
- Lactation suppression (dopamine receptor agonist)
Ex : cabergoline , bromocriptine
 - Antibiotic : usually flucloxacillin or clarithromycin, should be prescribed
 - Surgical management :
Surgical management is indicated for breast abscesses. Incision and drainage of abscess

Finding	Engorgement	Mastitis
Onset	Gradual	Sudden
Location	Bilateral	Unilateral
Swelling	Generalized	Localized
Pain	Generalized	Intense, localized
Systemic symptoms	Feels well	Feels ill



Puerperal Pyrexia

Definition : temperature of 38°C or higher on any two of the first 10 days postpartum exclusive of the first 24 hours (orally)

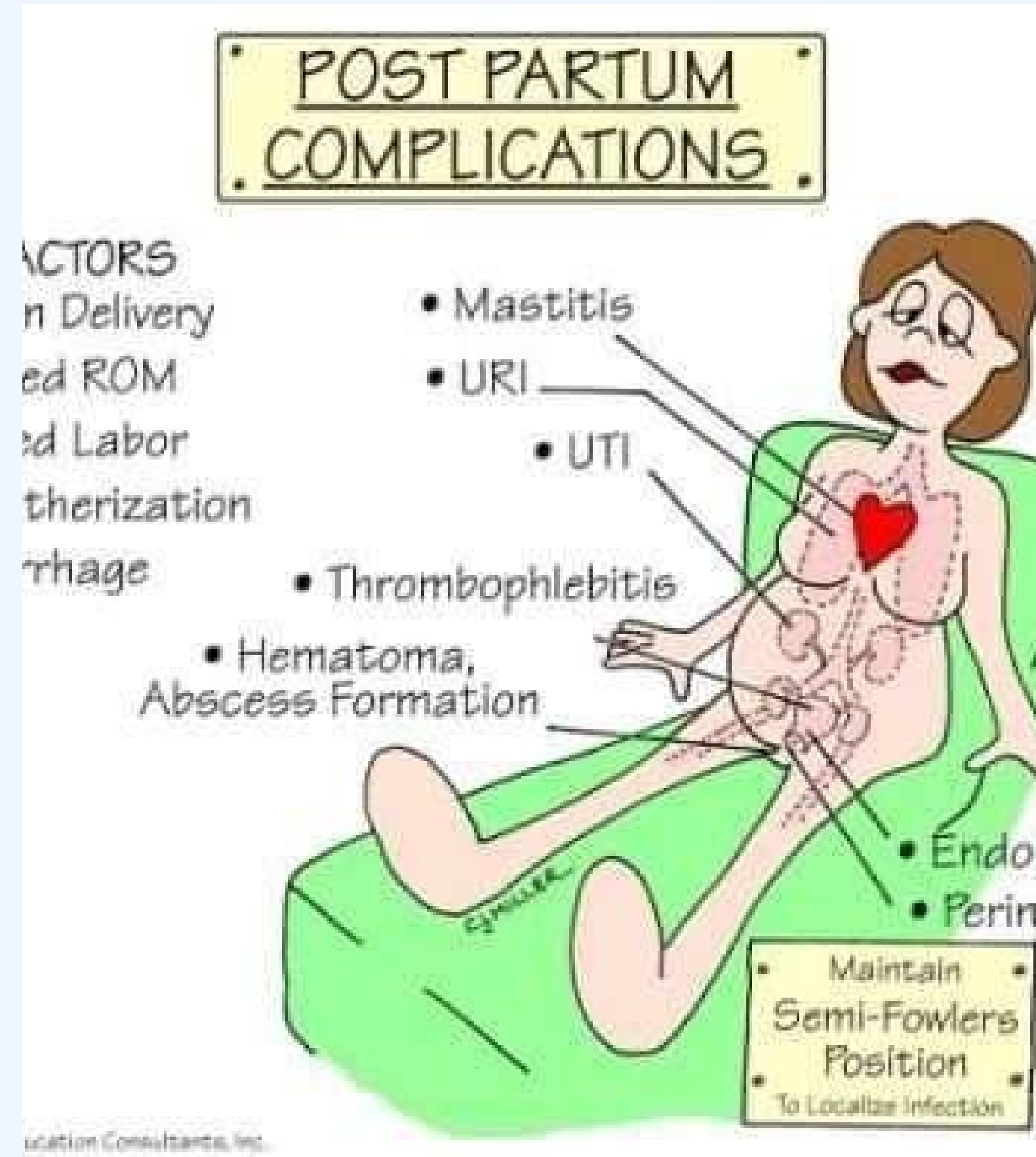
DDX :

- Breast infection (Mastitis or breast abscess)
- Puerperal Sepsis
- Surgical site infection (eg, episiotomy, laceration, abdominal incision)
- Respiratory infections
- Urinary tract infection (cystitis, pyelonephritis)
- Deep Venous thrombosis
- Septic pelvic thrombophlebitis
- Other medical causes of fever

Puerperal Pyrexia

History:

- When the membranes ruptured
- The length of labor
- The instrumentation used
- Sutures required
- Whether the placenta was complete
- Whether there was any bleeding during or after delivery
- Abdominal pain
- Bleeding and discharge from vagina
- History of breast feeding
- History of Nausea, vomiting and diarrhea
- History of fatigue, loss of appetite
- History of urinary complaint and output
- History of lower limb pain and swelling
- History of respiratory complaints



Puerperal sepsis

The following signs and symptoms should prompt urgent referral for hospital assessment :

- Pyrexia (greater than or equal to 38°C).
- Sustained tachycardia (≥ 90 beats/minute).
- Respiratory rate ≥ 20 breaths/minute).
- Abdominal or chest pain.
- Diarrhea and/or vomiting - may be due to endotoxins.
- Uterine or renal angle pain and tenderness.

Puerperal sepsis (genital tract infection)

- **Onset** : usually 2-3 days after delivery (in severe cases group A strep infection mainly may develop in the first 24 hr)

Predisposing factors:

- **General factors:**
- Decreased immunity such as anemia
- Antepartum or postpartum hemorrhage
- Diabetes or septic focus
- **Local factors :** (In the genital tract)
- Lack of antiseptic measures
- Premature rupture of membranes.
- Prolonged labor with excessive vaginal examination
- Retained parts of placenta or membranes.
- Intrauterine manipulations (e.g. manual separation of placenta)
- Instrumental delivery with possible genital tract Lacerations
- CS

PATHOLOGY:

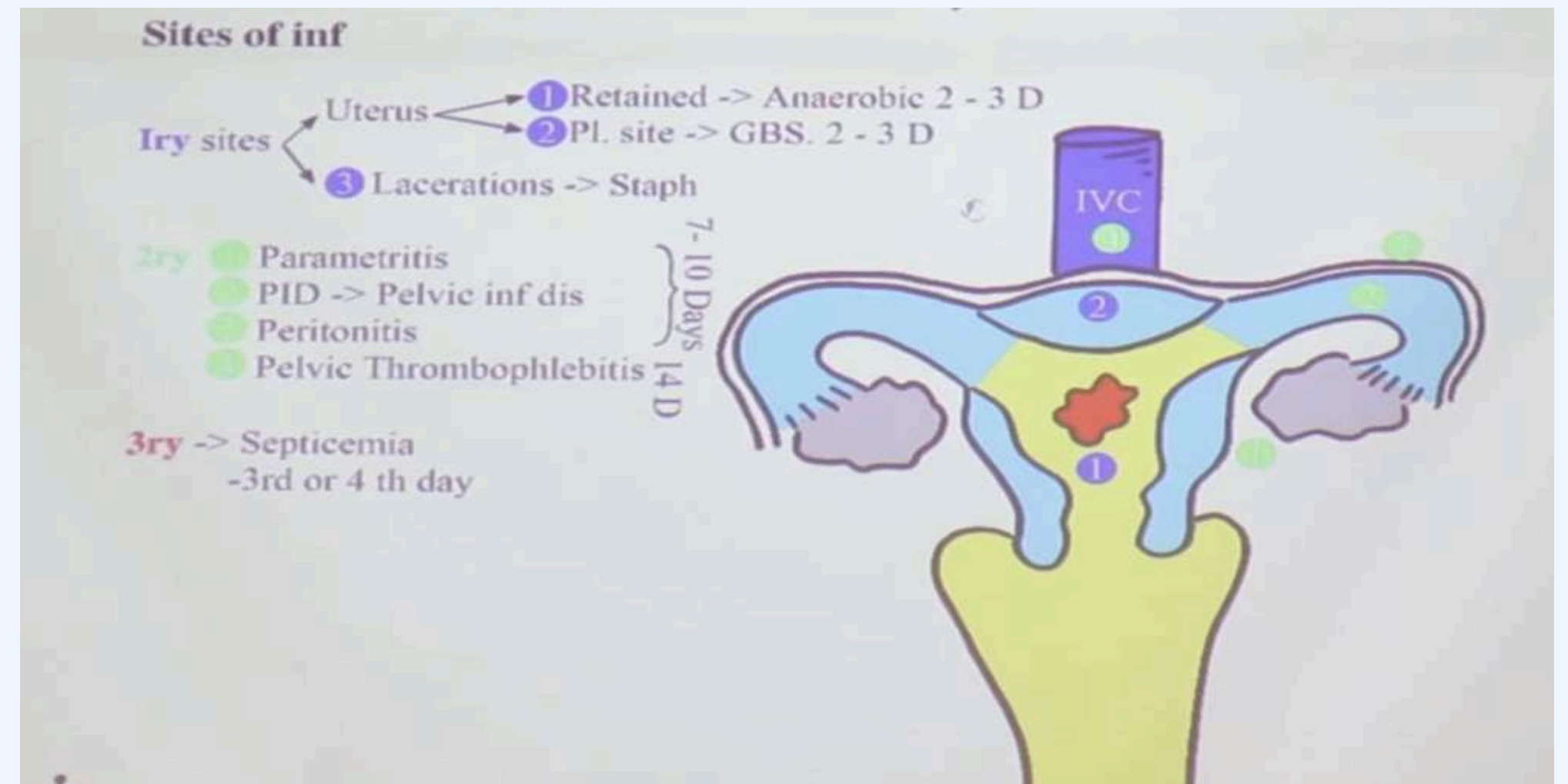
The pathological picture depends on the site of infection and its spread, so we may find :

- **Primary sites of**

- The uterus "the commonest site"
- Infected lacerations: In the perineum, vagina or cervix. Appears usually as ulcers with dirty base, greenish discharge with surrounding edema.

- **Secondary sites:**

- Para-metritis (is an infection of the parametrium (connective tissue adjacent to the uterus)
- Salpingo-oophoritis
- Pelvic thrombophlebitis
- Peritonitis



clinical feature and investigation

Clinical feature :

- Fever
- Pelvic pain
- Abnormal vaginal discharge
- Delay in uterine involution

Investigation :

- Pelvic examination
- CBC (leukocytosis , leukopenia)
- Electrolyte
- Blood and urine culture
- Pelvic US

Prevention :

- Hand washing to prevent the spread of infection among postnatal women
- A single intraoperative dose of antibiotics (co-amoxiclav or cephalosporin with metronidazole) is given before the skin incision

Management

INITIALLY BROAD SPECTRUM ANTIBIOTICS:

- Ampicillin 500 mg QDS
- Gentamycin 60-80 mg TDS
- Metronidazole 400 mg TDS

In severe cases :

- IV Clindamycin 600 mg IV 8 hourly
- IV Gentamycin 60-80 mg TDS
- IV cephalosporins

Wound infection

- Inflammation in the site of cesarian incision, episiotomy, laceration associated with delivery,
- On exam, **painful erythematous and edematous wound and discharge or vulvar edema with fever persistent despite antibiotic treatment develop around postoperative day 4**

Treatment :

- Remove suture under tension
- Clean and dress with antiseptic solution
- Analgesia + antibiotics

Chest complications

first 24 hours after delivery particularly after general anesthesia

Atelectasis

- Associated with general anesthesia
- associated with fever
- can be prevented by physiotherapy

Aspiration pneumonia

- wheezing, dyspnea, and hypoxia

CAUSES OF POST-OP FEVER WHEN STARTING ON

- 1st Day : Reactive to drugs or surgical tissue trauma
- 2nd Day : Atelectasis
- 3rd Day : IV line infection (STP)
- 4th Day : Pneumonia, DVT, UTI
- 5th Day : Wound infection (still pneumonia, DVT, UTI)
- 7th Day : Abscess somewhere
- After first week : allergy to drugs, transfusion-related-fever,

venous thromboembolism (deep vein thrombosis (DVT) and pulmonary embolism (PE)) :

Pre-existing risk factor :

- Previous VTE
 - Thrombophilia :.
- Medical comorbidities
- Age >35 years.
- Obesity (BMI ≥ 30 kg/m²) either pre-pregnancy or in early pregnancy.
- Gross varicose veins (symptomatic or above knee or with associated phlebitis, oedema/skin changes).
- Paraplegia (the inability to voluntarily move the lower parts of the body)



Clinical picture :

- DVT: Edema , Leg pain , Tenderness , warmth or erythema of the skin over particular area

Pulmonary embolism: Acute-onset dyspnea , sharp pain during breathing , and hemoptysis

Pulmonary embolism

DVT Clinical Evaluation



- Signs & Symptoms
 - Edema
 - Pain
 - Erythema
 - Tenderness
 - Fever
 - Prominent superficial veins
 - Pain w/ passive foot dorsiflexion (Homans' sign)
 - Peripheral cyanosis

Symptoms

Dyspnea	80%
Chest pain (pleuritic)	52%
Chest pain (substernal)	12%
Cough	20%
Hemoptysis	11%
Syncope	19%

Signs

Tachypnea (>20/min)	70%
Tachycardia (>100/min)	26%
Signs of deep venous thrombosis	15%
Fever (>38.5 °C)	7%

Complication of DVT and PE

DVT :

- Embolism
- Edema
- Venous ulcer
- Gangrene
- Varicose vein
- Pigmentation
- Pyrexia of unknown origin

PE :

- Sudden cardiac death
- Obstructive shock
- Atrial and ventricular arrhythmia
- Cor pulmonal
- Plural effusion

- The risk of thromboembolic disease rises fivefold during pregnancy and the puerperium. The majority of fatal thromboembolisms occur in the puerperium and are more common after cesarean section.
- **Those at high risk may be given prophylactic heparin injections.**
- If deep vein thrombosis or pulmonary embolism is suspected, full anticoagulant therapy should be commenced and a lower limb compression ultrasound and/or lung scan should be carried out within 24–48 hours

Urinary & GI complications

Urinary retention

Postpartum urinary retention (PUR) :is a common postpartum complication characterized by [dysuria](#) or a [complete inability to urinate after delivery](#)

Overt PUR: inability to void 6 hours after vaginal delivery or, in case of [cesarean section](#), 6 hours after removal of urinary catheter

Covert PUR: post-void residual [bladder](#) volume ≥ 150 mL following [micturition](#) (assessed by [ultrasound](#) or catheterization)

The etiology depends on multiple factors. Because of physiological changes during pregnancy, the bladder is hypotonic with an increased post-void residual volume. The occurrence of a perineal neuropathy during delivery may cause a urinary retention.

- **Risk factors are :** primiparity ; prolonged labor and perineal lacerations

Management:

- Leave an indwelling catheter on continuous drainage for 48 to 72 h
- After the bladder has been continuously emptied, the catheter can be removed and then the volumes of urine passed can be monitored

Urinary tract infection

- **urinary tract infections that take place in the days or weeks after giving birth.**
 - **The most common pathogen is E.coli**
 - **Clinical picture :**
 - **Lower urinary symptoms** : frequency, urgency, dysuria , haematuria
 - **pyelonephritis** : fever, vomiting and flank pain and tenderness
- **Management :**
 - Fluid if there is signs of dehydration but not over hydration to avoid rising in blood pressure
 - Proper antibiotic : Trimethoprim-sulfamethoxazole , nitrofurantoin, ciprofloxacin
 - Women after cesarian section can be at increased risk of uti compared to vaginal delivery

GI Assessment

Assessment of the bowel is important in all postpartum patients. It is especially vital for patients following C-sections. The bowel is assessed for:

- Bowel sounds
- Return of bowel function
- Flatus
- Color and consistency of stool
- Prescribed stool softeners or laxatives are administered as needed to treat constipation and ease perineal discomfort during defecation

GI complications

Incontinence of feces

- 35% of women undergoing their first vaginal delivery develop anal sphincter injury. Approximately 10% will still have anal symptoms of urgency or incontinence at 3 months after birth.
- **Etiology**
 1. instrumental delivery (use of vacuum 16% extraction is associated with less perineal trauma than forceps 32% delivery)
 2. Prolonged second stage of labour,
 3. birthweight over 4.0 kg,
 4. occipito-posterior position
 5. Episiotomy.
- **In women who have a recognized anal sphincter rupture, 37% continue to have anal incontinence despite primary sphincter repair.**

Others GI complication

- **Constipation** : as a result of an interruption in the normal diet, intrapartum dehydration, and opiate use.
- **hemorrhoids**
- Enlarging uterus and macrosomic Babys in addition to constipation can lead to enlarged rectal veins and piles

Psychological problems

Baby blues

- **Transient period of mild depression in 50 to 85% of women during the first few days of delivery.**

Common symptoms

- feeling guilty
- crying, sadness
- Mood lability
- Anxiety
- Tearfulness
- Lethargy
- Insomnia
- Irritability
- Somatic symptoms (e.g., changes in sleep)

- **Symptoms usually resolve spontaneously within 2 weeks.**

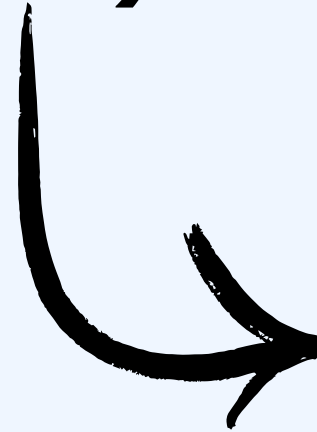
Post Partum Depression (PPD).

Major depressive disorder during pregnancy .

- **PPD generally lasts for 3-6 months,**
- **PPD greatly affects the patient's ability to complete activities associated with daily living.**

- **Typically develops within 4 weeks following delivery**
- **Symptoms must be present for at least 2 weeks to confirm the diagnosis.**

- Includes the typical clinical features of major depressive disorder
("DICES GAPS")



- Depressed mood (can present as irritability in children)
- Interest loss (anhedonia)
- Concentration (poor concentration or difficulty making decisions)
- Energy (low energy or fatigue)
- Sleep (insomnia or hypersomnia)
- Guilt (low self-esteem)
- Appetite (decreased appetite or overeating)
- Psychomotor agitation or retardation
- Suicidal ideation.

- **First line of treatment :**
antidepressant and supportive care , reassurance from family and health care professionals

Postpartum psychosis

- The **most severe** form of postpartum psychiatric illness.
- It is a **rare** event (1 to 2 per 1000 women) after childbirth
- usually present **with schizophrenia or manic depressive disorder**
- All patient need **hospitalization , medical therapy** and long term care.

Symptoms :

- **Loss of inhibition, agitation**
- **Disorganized behavior**
- **Paranoia**
- **Hallucinations**
- **Delusions**
- **Confusion**
- **Depression or elevated mood**
- **Severe insomnia**
- **Suicidal ideation**
- **Thoughts of harming the baby**

- **as early as the first 48 to 72 hours after delivery.**
- **develop symptoms within the first two postpartum weeks**
- **Onset is sudden.**

	Postpartum Blues or “Baby Blues”	Postpartum Depression	Postpartum Psychosis
Baby	Any	Usually 2nd	Usually 1st
Onset	Begins after birth and lasts up to 2 weeks	Begins within 1 month of birth and symptoms may continue	Begins within 1 month of birth and symptoms may continue
Mother cares about baby	Yes	May have thoughts about hurting the baby	May have thoughts about hurting the baby
Symptoms	Mild depressive	Severe depressive	Severe depressive and psychotic symptoms
Treatment	Self-limited; no treatment necessary	Antidepressants	Antidepressants and mood stabilizers or antipsychotics

THANK YOU