

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Genital tract injuries during delivery

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Types of genital injuries

- Perineal tears.
- Vaginal tears.
- Cervical tears.
- Rupture of uterus.
- Vaginal and pelvic Haematoma..
- Fistulae.



- **Rupture of the uterus during labour is one of the obstetrical emergencies.**
- **Genital injuries are usually manifest as vaginal bleeding after delivery in the presence of well contracted uterus.**
- **The bleeding may be internal bleeding as in haematomas or ruptured uterus.**



Cervical injuries:

- Bleeding which does not appear to be arising from the vagina or perineum and which continues despite a well contracted uterus, is an indication for examining the cervix to exclude cervical injury.
- Minor cervical lacerations are extremely common but does not cause symptoms.
- Deep lacerations and particularly those that involve the vaginal vault cause excessive bleeding and need to be managed in the theatre under anesthesia.



Causes of deep cervical lacerations:

- 1. Precipitate labour.**
- 2. Application of forceps with the cervix incompletely dilated.**
- 3. Rapid delivery of the head in breech presentation.**
- 4. A scar in the cervix may also tear.**

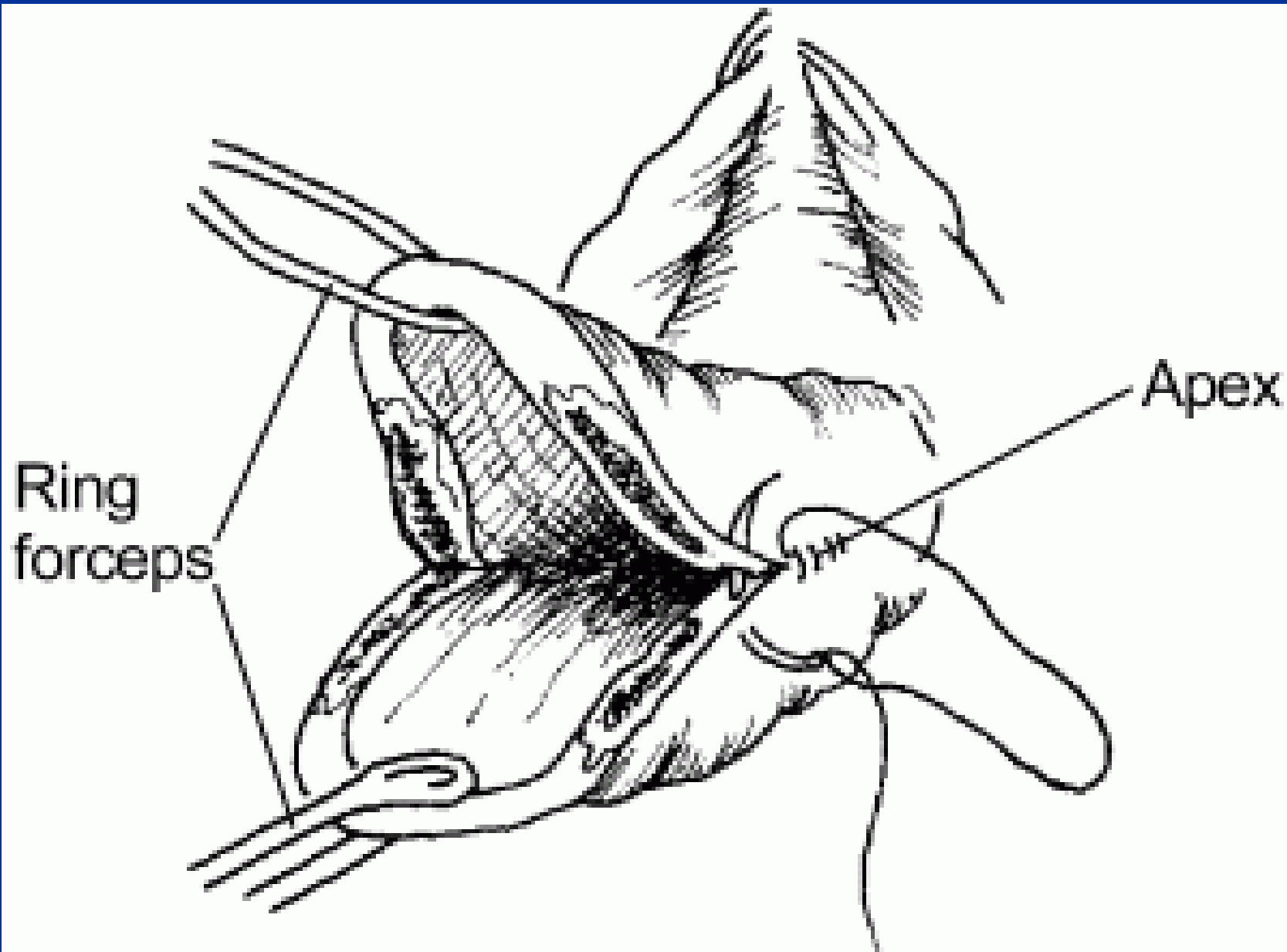


Management:

- Prompt recognition of the injury and action to control the bleeding is essential.
- Good light for proper visualization of the tear is essential so the patient should be taken to the theatre and examined under general anesthesia.
- By using two pairs of sponge forceps applied to the cervix at any one time, it is possible to inspect the whole circumference accurately.
- Identification of the apex of the tear is essential before commencing repair.
- Interrupted dexion sutures can be inserted through the whole thickness of its wall.



Repair of cervical tears



Perineal tears and vaginal tears:

- Perineal lacerations may occur with normal or instrumental vaginal delivery.
- Vulval and anterior vaginal tears do occur with vaginal delivery but posterior vaginal tear associated with perineal injury is more common and occurs with the delivery of the head and sometimes with the shoulders.
- Perineal tears are classified based on the involvement of the perineum.



1. First degree tear

Involves only the skin and minor part of the perineum

2. second degree perineal tear:

involves the skin, perineal muscle (perineal body) and posterior vaginal wall.

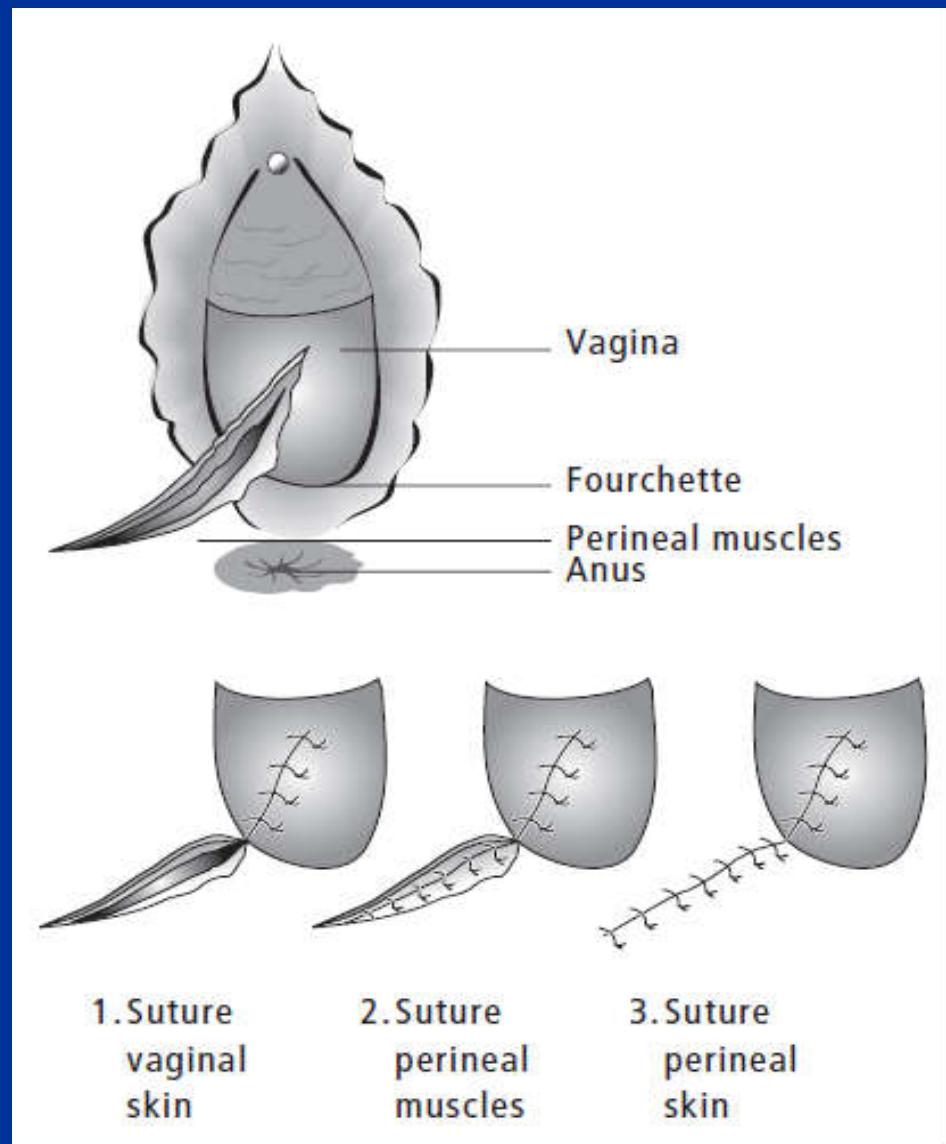
3. Third degree tear :

Injury to anal sphincter in addition to the above structures.

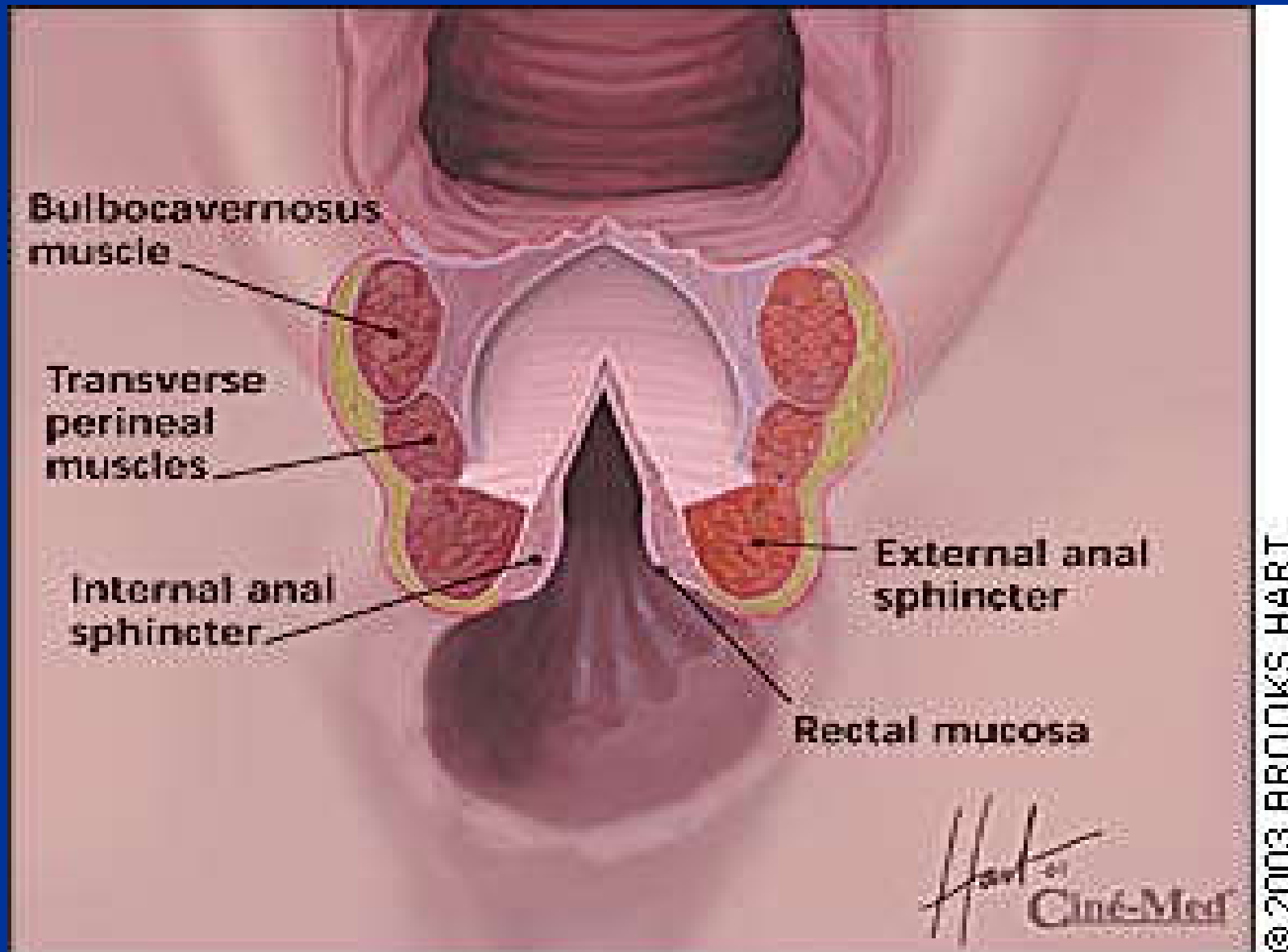
4. fourth degree tear. When the tear damages the sphincter and involves the anal mucosa.



Second degree perineal tear:



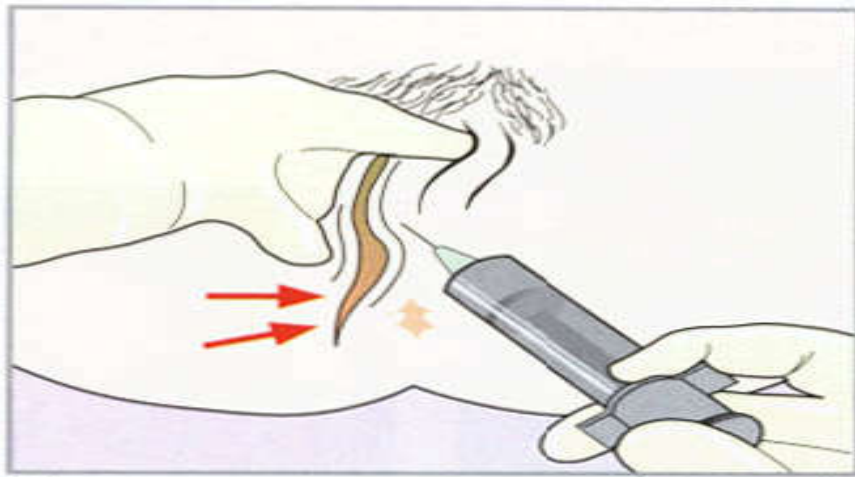
4th degree perineal tear



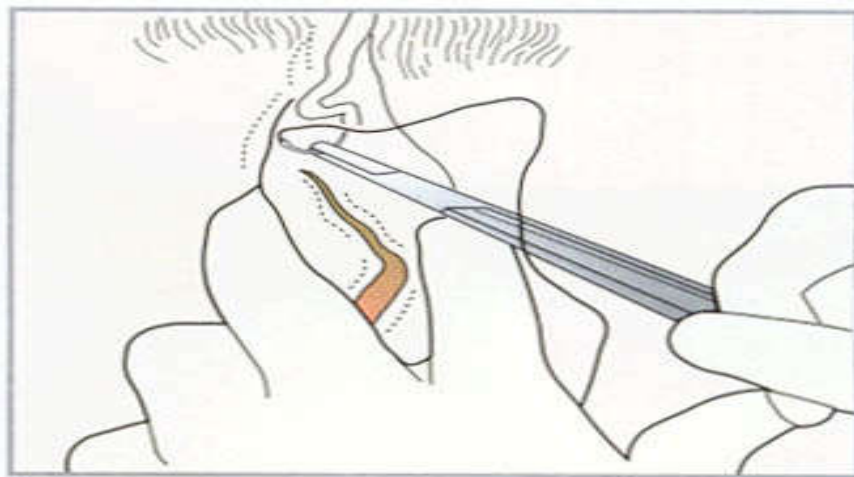
Treatment of 1st and 2nd degree tears:

- It is important to repair all perineal tears immediately , to prevent any infection of the raw surface.
- Local infiltration of the perineum with xylocain is required for repair.
- The vaginal epithelium is sutured from the apex of the tear (which must be clearly identified) down to the introitus with a continuous or interrupted sutures of polyglycol.
- The perineal muscles are repaired with interrupted sutures.
- The skin edge are brought together without tension.

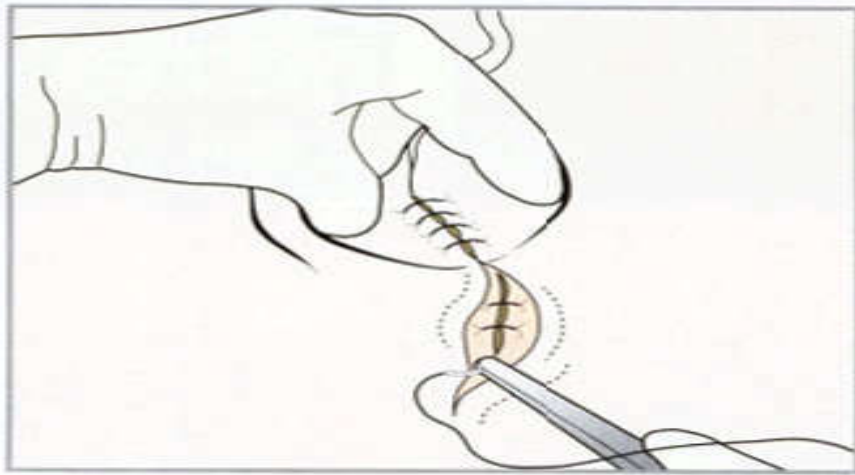




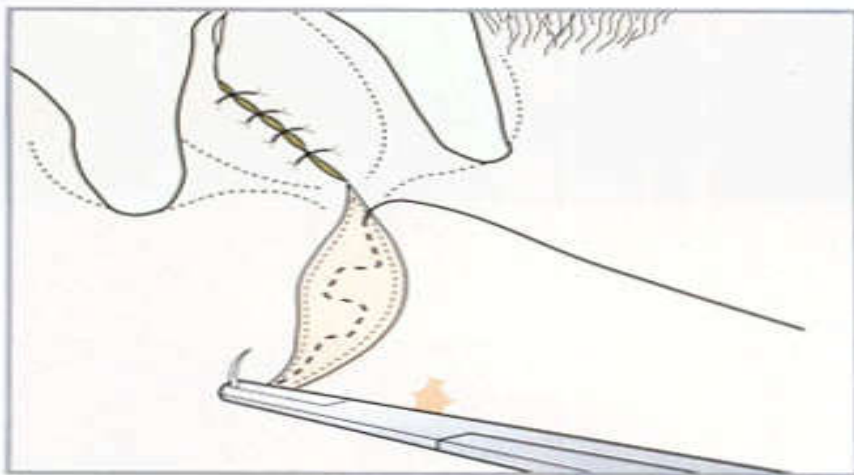
(a)



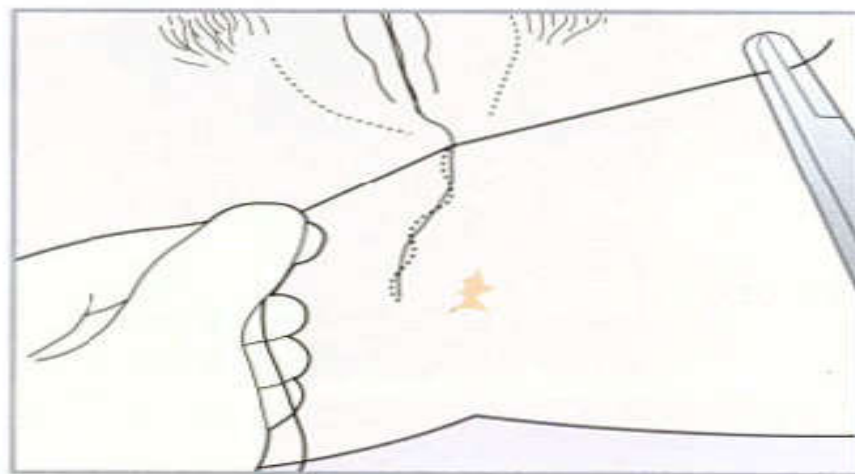
(b)



(c)



(d)



(e)



Treatment of 3rd and 4th degree tears:

- The operation should be done by an experienced obstetrician in the theatre with general or epidural anesthesia.
- The anal mucosa is first repaired with fine stitches, tying the knots inside the bowel lumen
- The ends of the sphincter are found and carefully brought together with interrupted suture
- The other tissues are repaired as above.



Vulval and paravaginal haematomas

Haematomas are divided into:

1. Infralevator (which lie below the levator ani muscle e.g.

- a. vulval and perineal haematomas.
- b. Paravaginal haematomas.
- c. Haematoma of the Ischiorectal fossa.

2. Suprlevator (above the levator ani muscle):

Spread beneath the broad ligament or bulge into the wall of the upper vagina



Haematomas of the vulva:

- This may be caused by rupture of a vulval varix.
- More often it occurs after perineal repair when a vessel is in spasm at the time of repair, relax and bleeds later.
- It can occasionally occur after normal labour with apparently intact perineum.



Clinical features:

- The haematoma appears suddenly as a very tender purple swelling on one side of the vulva.
- It may reach 10 cm or more in diameter.
- There is severe perineal pain and some times shock.
- So any woman complains of severe perineal pain after delivery, the perineum should always be inspected before giving her analgesics.



Vulval hematoma



Treatment:

- If the swelling is increasing in size and more than 5cm , it should be incised and the clot turned out.
- If the bleeding vessel can be identified it should be ligated (but this is unlikely).
- A drain is left in the cavity and a firm dressing is applied.
- If the haematoma is less than 5cm and not expanding it can be managed by observation using ice- packs and pressure dressings to limit expansion

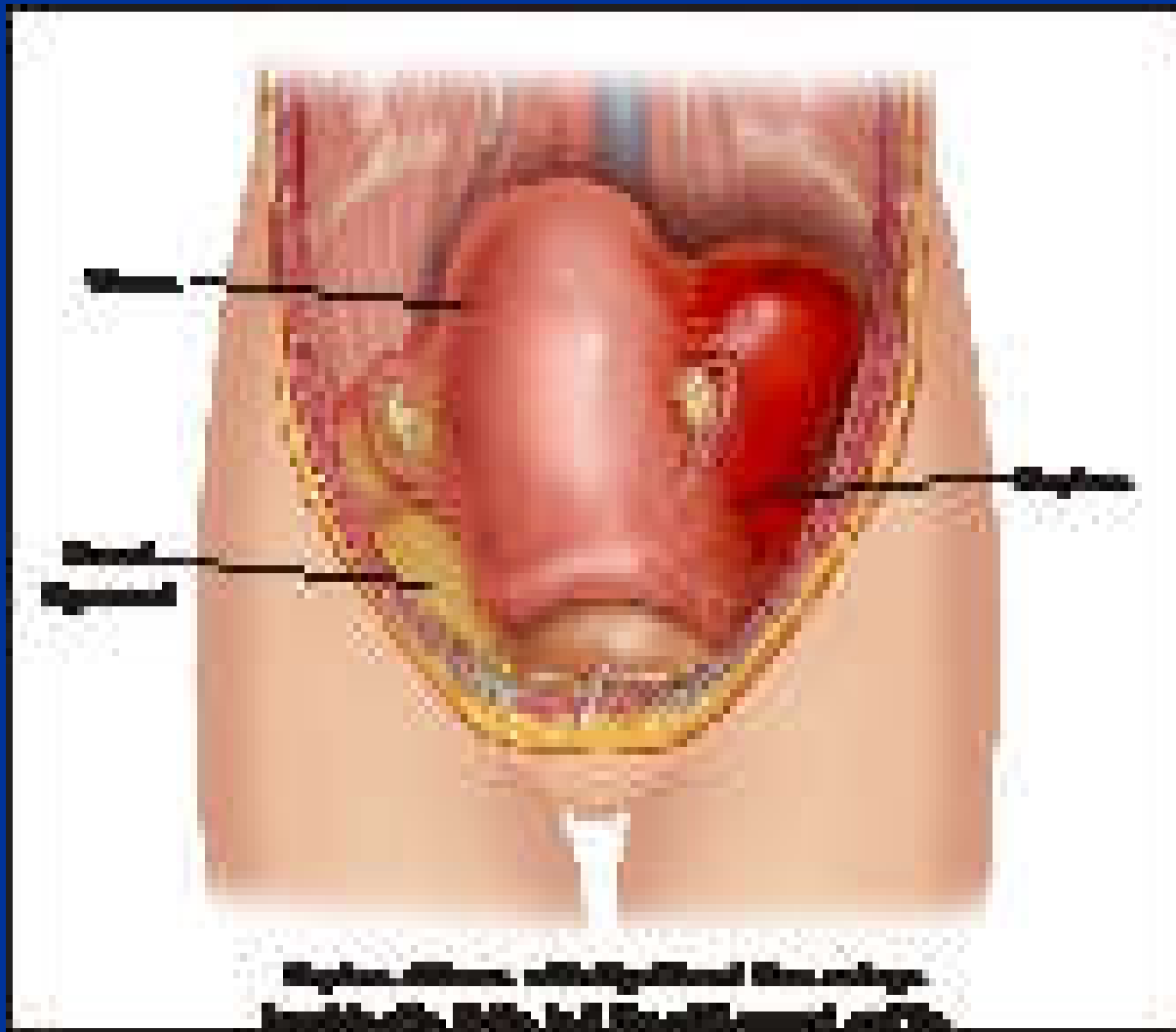


Broad ligament haematoma:

- This is uncommon accident after delivery.
- A deep vessel is torn at the time of delivery, goes into spasm and then relax and bleeds later.
- A haematoma forms above the pelvic diaphragm and spread into the base of the broad ligament.
- It may also seen with uterine rupture.



Broad ligament hematoma



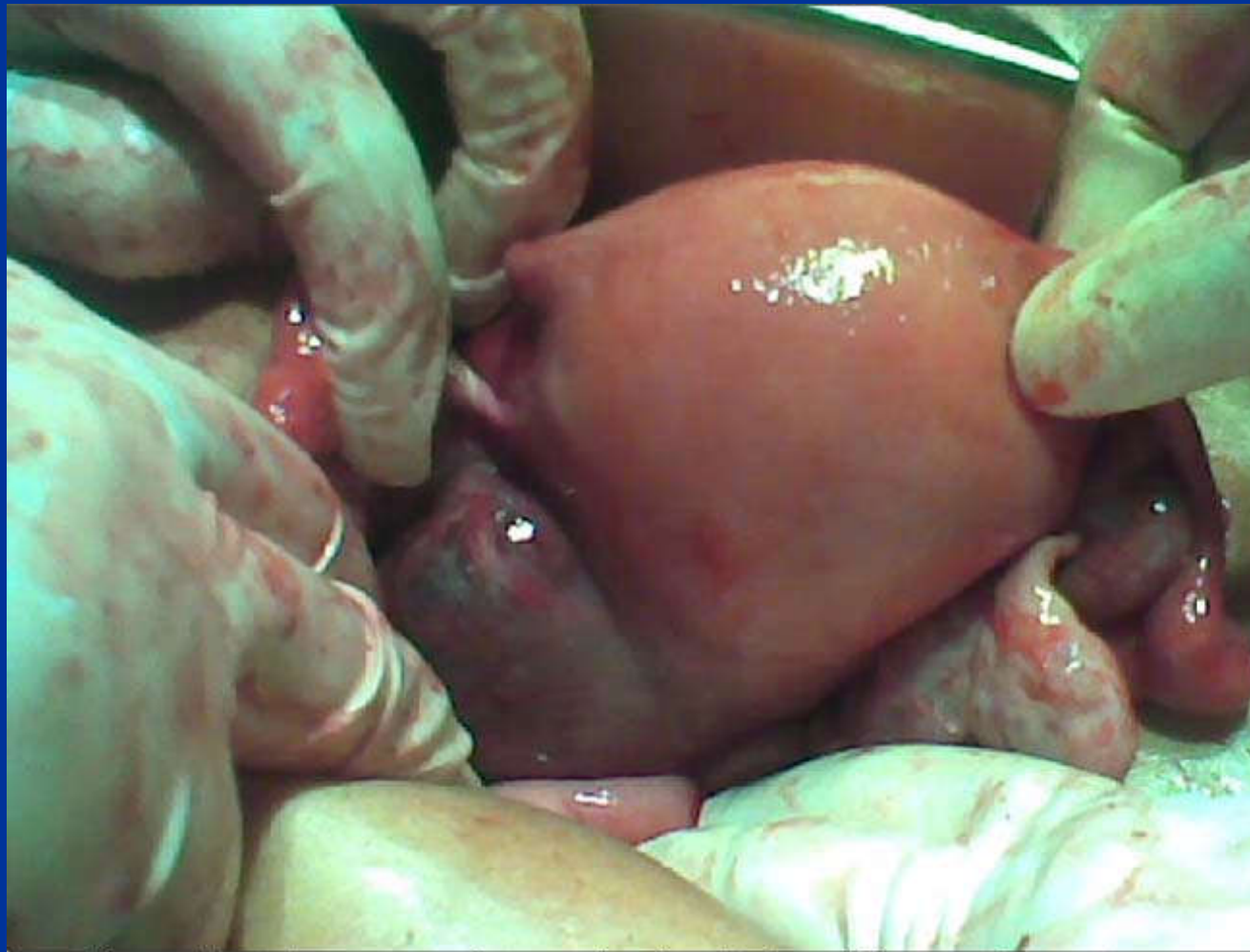


Figure: Posterior aspect of uterus showing Lt. broad ligament haematoma.

Clinical features:

- **Pain and deterioration in the woman's general condition.**
- **There will be progressive anemia and slight fever.**
- **When the haematoma is large enough it can be palpated on abdominal examination and it will displace the uterus upward and to one side.**



Treatment:

- It usually undergoes gradual absorption, but it will take several weeks if it is large.
- Infection is rare but may occur and leads to abscess formation.
- Most cases are treated conservatively with blood transfusion and antibiotics.



Fistulae:

vesico-vaginal fistula:

- This may occur as a result of pressure by the presenting part in prolonged labour or by direct injury during operative procedures such as forceps or caesarean section.
- In obstructed labour prolonged pressure between the head and the pubic bone may cause local ischaemia and subsequent necrosis of the anterior vaginal wall and the base of the bladder leading to a vesico-vaginal fistula.



- Recto-vaginal fistula result from third degree perineal tear with improper healing.
- The patient will complain of urinary or fecal incontinence.
- These fistulae are uncommon now with proper obstetric care.
- Treatment by surgical repair.



EPISIOTOMY

- Episiotomy is an intentional surgical incision of the perineum made to increase the diameter of the vulval outlet.
- It is similar to a 2nd degree perineal tear.
- It is not advocated for every delivery and it is done only in certain indications.



Indications of episiotomy:

Absolute indications:

- previous perineal reconstructive surgery.
- previous pelvic floor surgery.

Relative indications:

- shoulder dystocia.
- rigid perineum.
- fetal distress.
- an instrumental or breech delivery.



How to perform an episiotomy

Anesthesia:

-in cases of normal vaginal delivery it can be done under local infiltration of the perineum.

-In cases of instrumental deliveries it should be done under epidural or spinal anesthesia.

Technique:

-A sharp scissors is used to make a single incision about 3–6 cm depending on the size of the perineum.

-The depth involves the superficial perineal muscles like a second degree tear.

-The episiotomy must be made in a single cut. If it is enlarged by several small cuts , a zigzag incision will be produced which will be difficult to repair.

-The episiotomy should begin in the midline at the fourchette.



Types of episiotomy:

1.Midline:

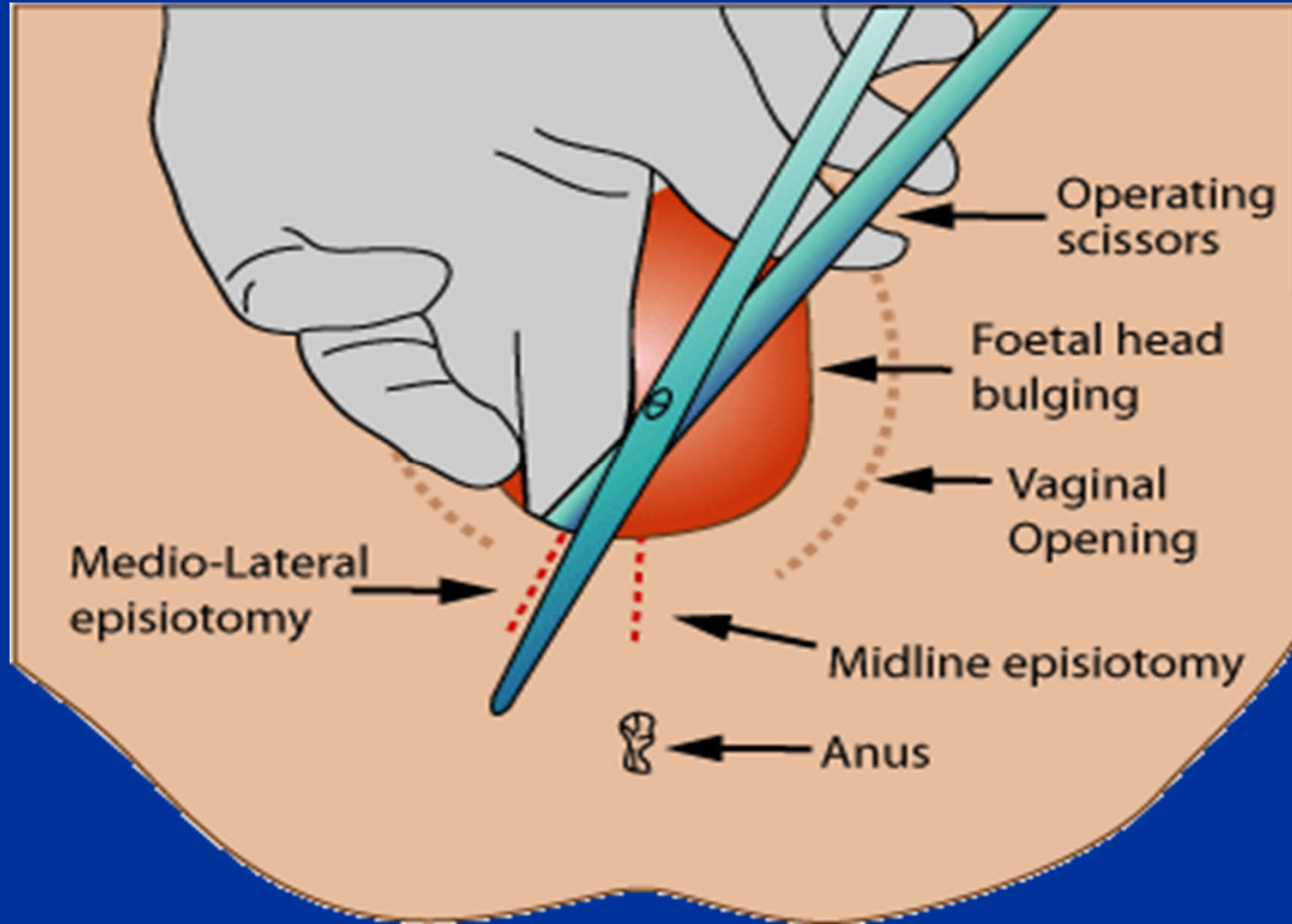
-a midline episiotomy starting from the fourchette for a few centimeters towards the anus.

2.Mediolateral:

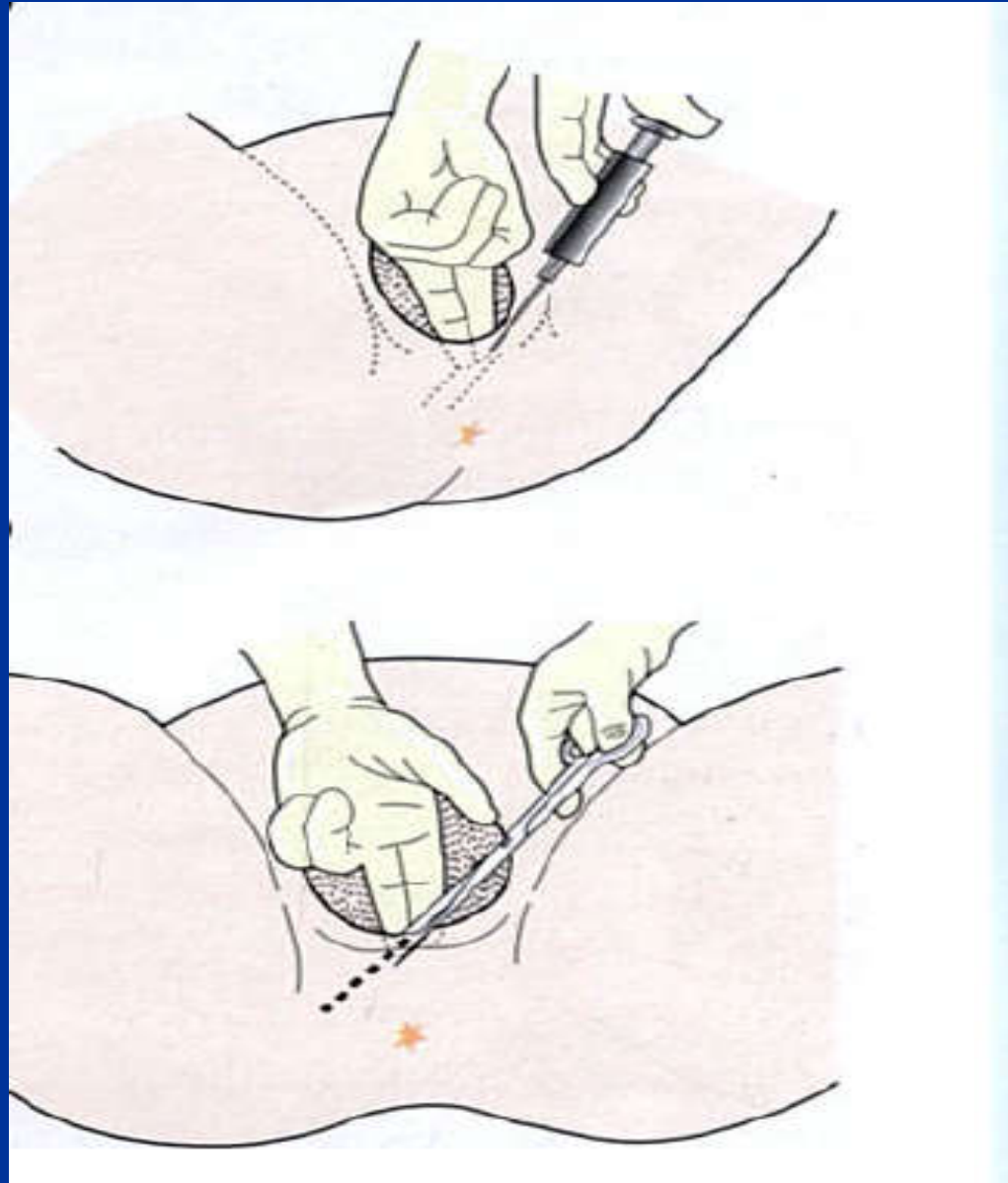
-a mediolateral episiotomy starting from the fourchette going laterally to 45°.



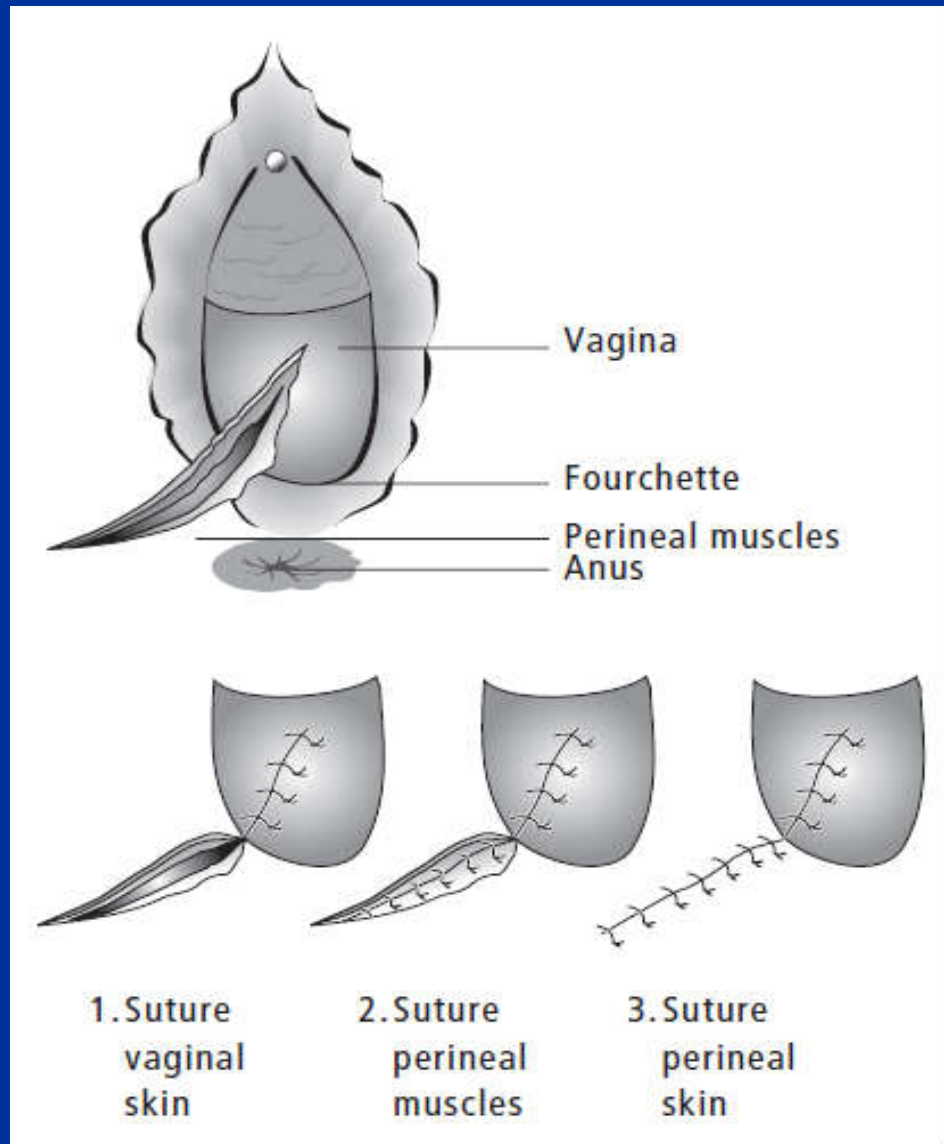
How to perform episiotomy



Performing episiotomy:



Repair of episiotomy:



Advantage and disadvantage of Midline episiotomies :

Advantages:

- minimal bleeding.
- easier to repair.
- heals well and quicker compared with the mediolateral episiotomy.
- There is less pain in the postpartum period.
- The incidence of dyspareunia is less.

Disadvantages:

it is associated with more 3rd and 4th degree tears because of the straight easy extension into the anus.



Complications of episiotomy

- If the episiotomy is performed too far laterally it will not increase the diameter of the vulval outlet but may cause damage to the right Bartholin's gland which cause a decrease in vaginal lubrication or cyst formation.
- Third degree tear to the anal sphincter.
- Bleeding which can be heavy.
- Infection.
- Dysparuenia.



Thank you

