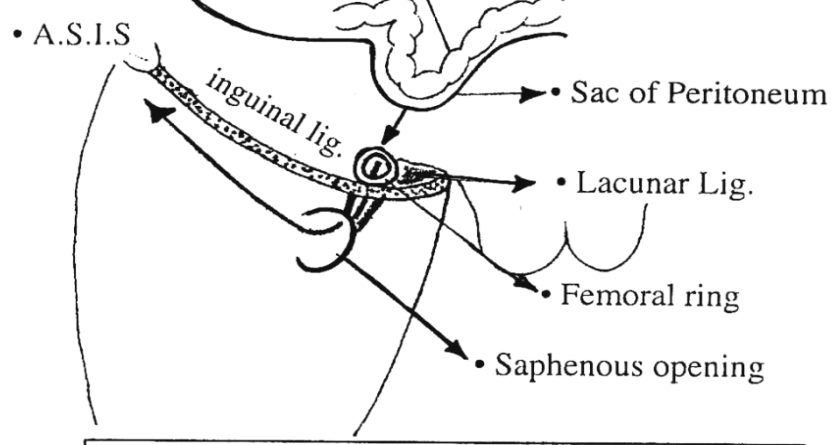
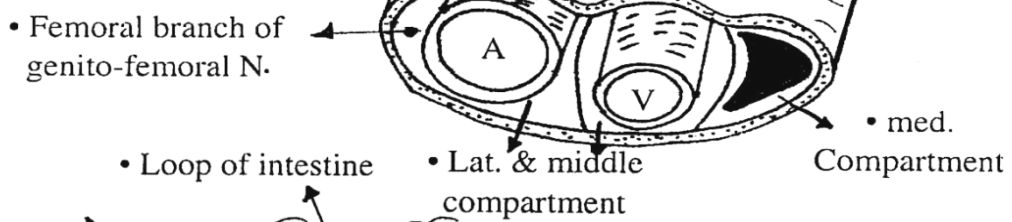
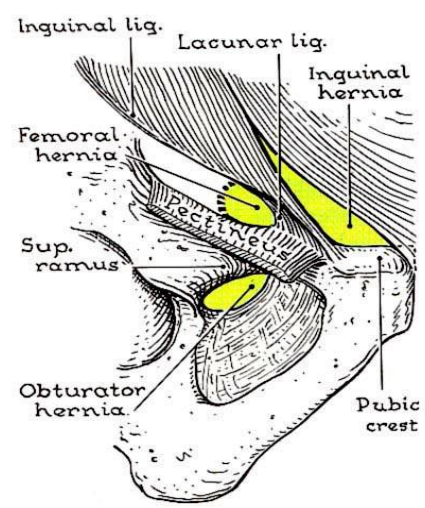


**Femoral Canal**



**\* Pathway Of Femoral Hernia \***



Three hernial sites

# FEMORAL HERNIA

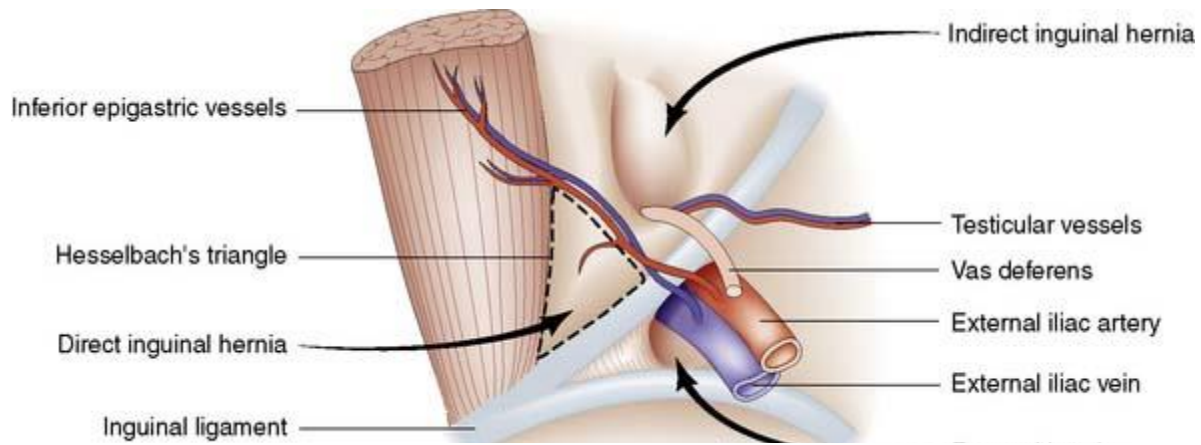
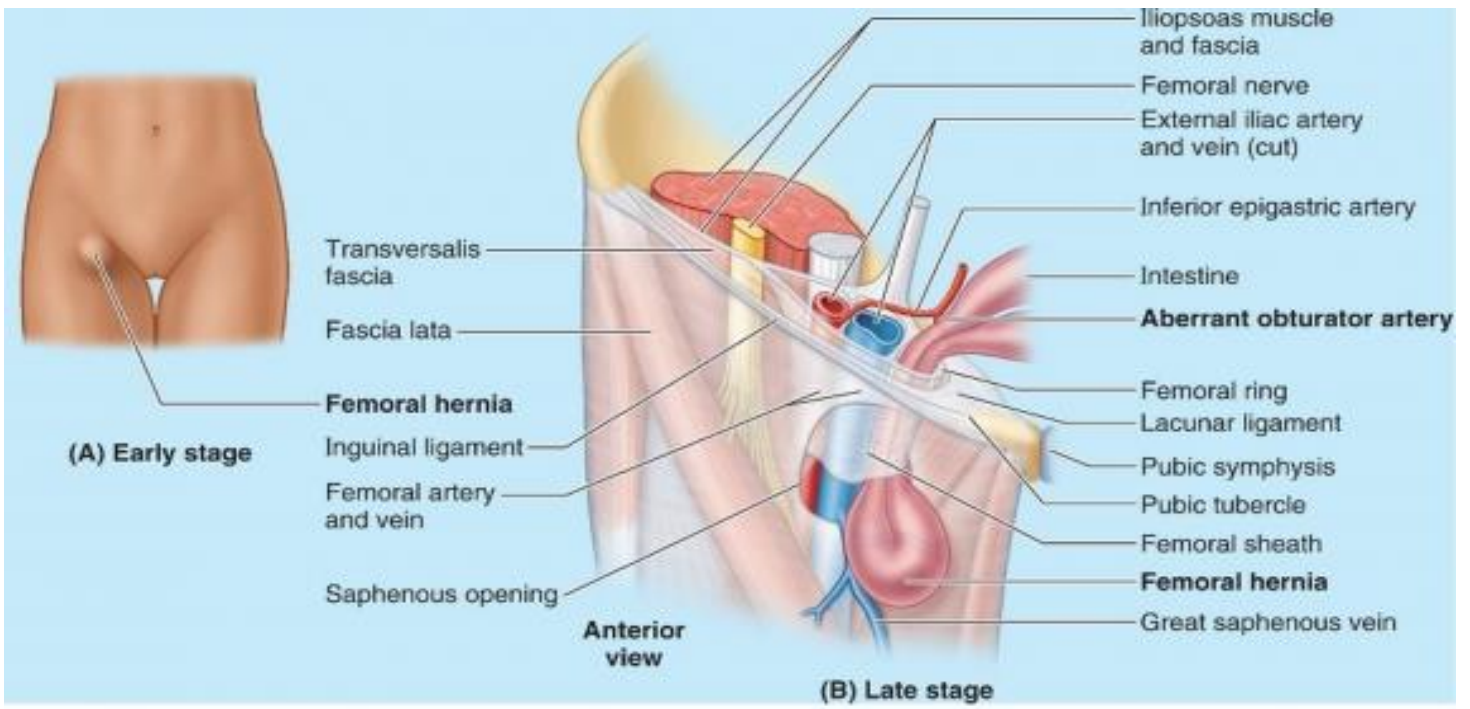
## ★ Incidence:

- Femoral hernia represent **3%** of external abdominal hernia.
- More in **females** because:
  1. Wide pelvis → ***wide femoral ring*** .
  2. Repeated pregnancies & labor and raised ***intra-abdominal pressure***.
  3. ***Weak muscles and ligaments***.

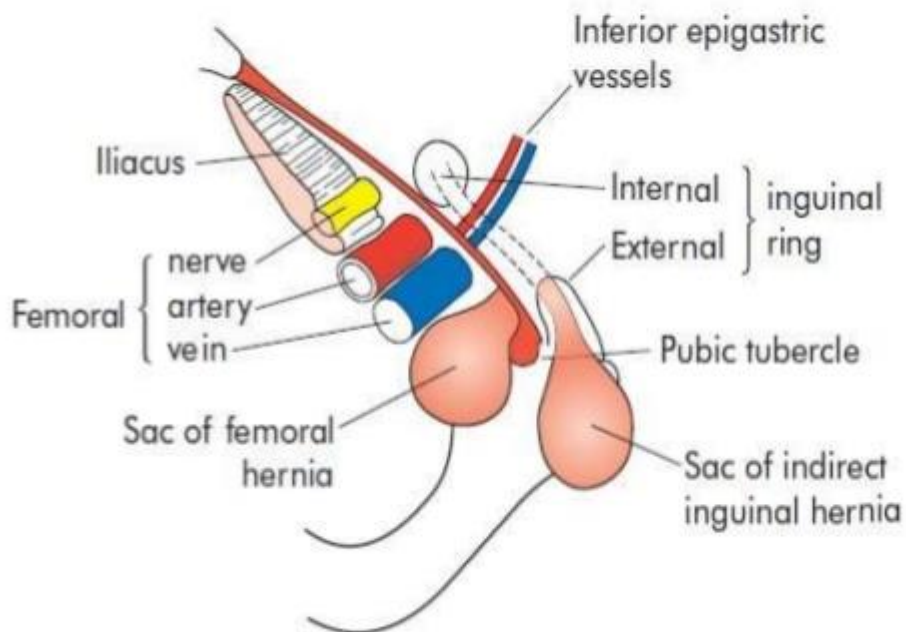
★ **Aetiology:** Always acquired pulsion sac is formed due to raised intra-abdominal pressure & weak abdominal wall .

## ★ Pathology:

1. ***Defect:*** Femoral ring.
2. ***Sac:*** It descends downwards through the femoral ring → femoral canal, then it passes forwards through the saphenous opening. The hernia enlarges upwards & lateral towards the inguinal ligament in the superficial fascia.
3. ***Contents:*** Usually contain omentum , intestine or urinary bladder. Richter's hernia is common.
4. ***Coverings:*** Femoral septum, contents of femoral canal, anterior wall of the femoral canal, cribriform fascia, superficial fascia of the thigh & skin.

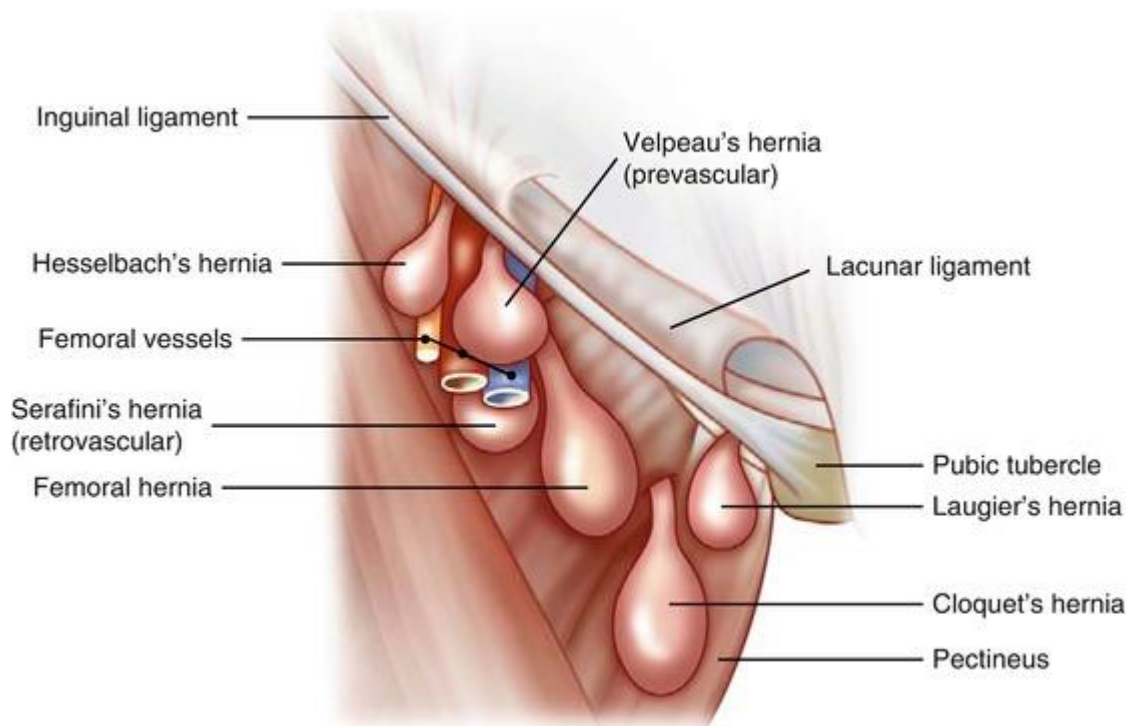


## Groin Hernias



5. Several **rare subtypes** of femoral hernia have been described :

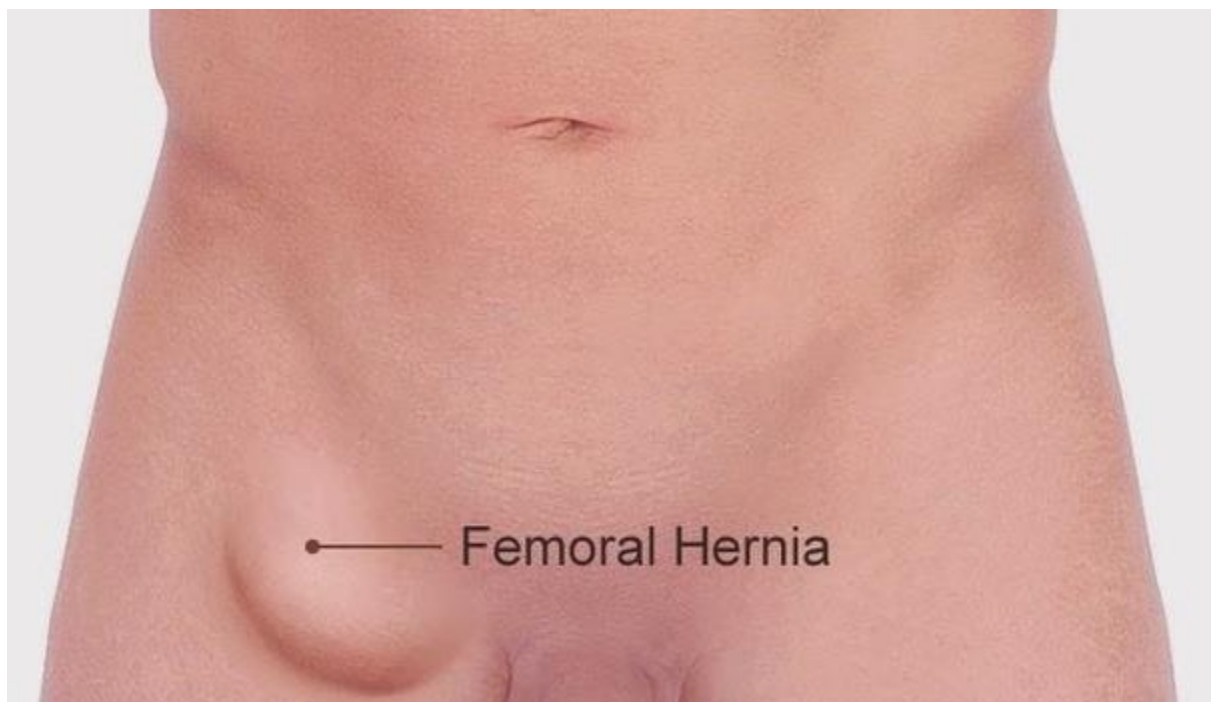
<b>Narath's hernia'</b>	In congenital dislocation of hip joint ,the hernial sac pass within the femoral sheath behind the femoral vessels .
<b>Serafini's hernia (Retrovascular )</b>	The hernial sac emerges behind femoral vessels .
<b>Velpeau hernia (Prevascular)</b>	The hernial sac lies in front of the femoral vessels in the groin .
<b>Hesselbach hernia</b>	The neck of the sac lies lateral to the femoral vessels.
<b>Laugier hernia</b>	The hernial sac transverses the lacunar ligament .
<b>Cloquet's hernia'</b>	The hernial sac descends deep to the pectineal fascia .



★ **Complications:** It has narrow neck → complications are very common.

★ **Clinical picture:** (As general).

1. **Site:** In the femoral triangle below the inguinal ligament and below & lateral to the pubic tubercle.
2. **Direction of descent:** Downwards, forwards then upwards & laterally.
3. **Direction of reduction:** Downwards then backwards & finally upwards.
4. **Special tests:**
  - Pressure on **saphenus** opening → prevents descent of hernia.
  - **Internal ring test** : the hernia appears below the inguinal ligament .
  - **Zeiman's test** : impulse on cough below inguinal ligament .

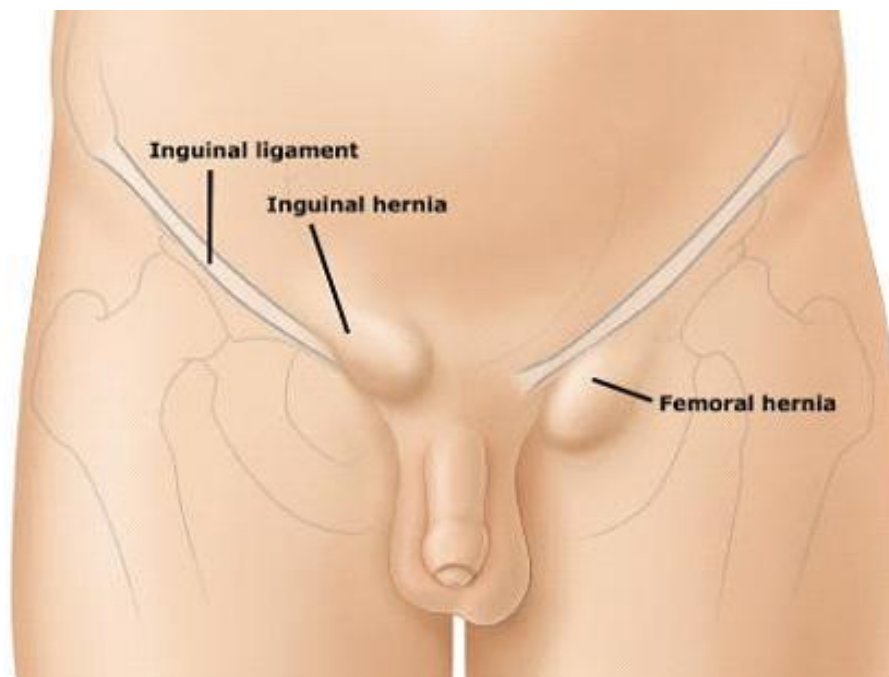


★ **D.D.:** a) *Inguinal hernia*

* <i>Inguinal hernia</i>	* <i>Femoral hernia</i>
<ul style="list-style-type: none"><li>• Above the <i>inguinal ligament</i>.</li><li>• Above &amp; medial to pubic tubercle</li></ul>	<ul style="list-style-type: none"><li>• Below the <i>inguinal ligament</i></li><li>• Below &amp; lateral to <i>pubic tubercle</i></li></ul>
<ul style="list-style-type: none"><li>• Characteristic direction of <i>reduction &amp; descent</i> and <i>special tests</i>.</li></ul>	

b) **Other swellings in the femoral triangle :**

- **Reducible femoral hernia** should be differentiated from :
  - Inguinal hernia , obturator hernia , saphena varix, psoas abscess , femoral aneurysm .
- **Irreducible femoral hernia** should be differentiated from :
  - Irreducible inguinal or obturator hernias , enlarged inguinal L.Ns , ectopic femoral testis, , lipoma & sarcoma.



★ **Surgical treatment:** is the only line of treatment. (Truss is not used)

I ) **Laparoscopic hernioplasty** by synthetic mesh is increasingly popular and recommended nowadays .

II ) **Open surgery** by one of the following approaches :

1. **High inguinal approach: (Letheissen's Operation)**, commonly used.

◆ **Through an inguinal incision** one finger above & parallel to the med. 2/3 of inguinal ligament (the same as inguinal hernia).

◆ After excision of the sac repair of the femoral ring by one of the followings:

a) Plugging the femoral ring with synthetic mesh ( open hernioplasty ) .

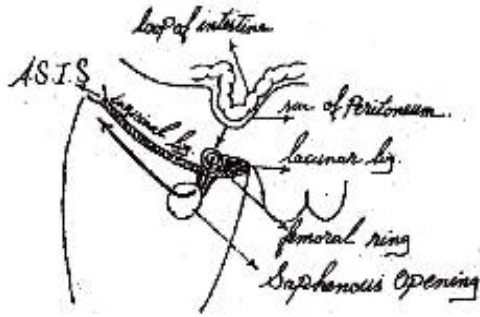
b) Suturing of conjoint tendon to pectineal ligament to close the femoral ring and strengthening the posterior wall of inguinal canal i.e. **McVay's repair**.

c) Suturing of inguinal ligament to pectineal ligament.

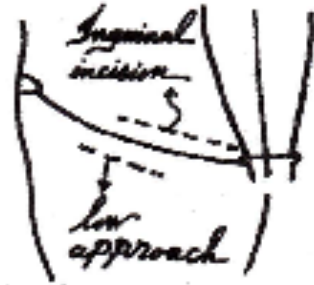
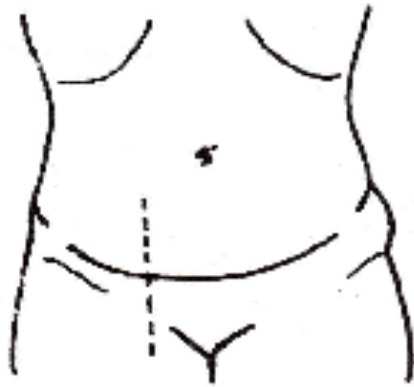
d) Suturing conjoint tendon to inguinal ligament to pectineal ligament.

◆ **Advantages:** (The reverse of disadvantages of low approach).

◆ **Disadvantage:** Disturbs shutter mechanism and weakens the posterior wall of inguinal canal.

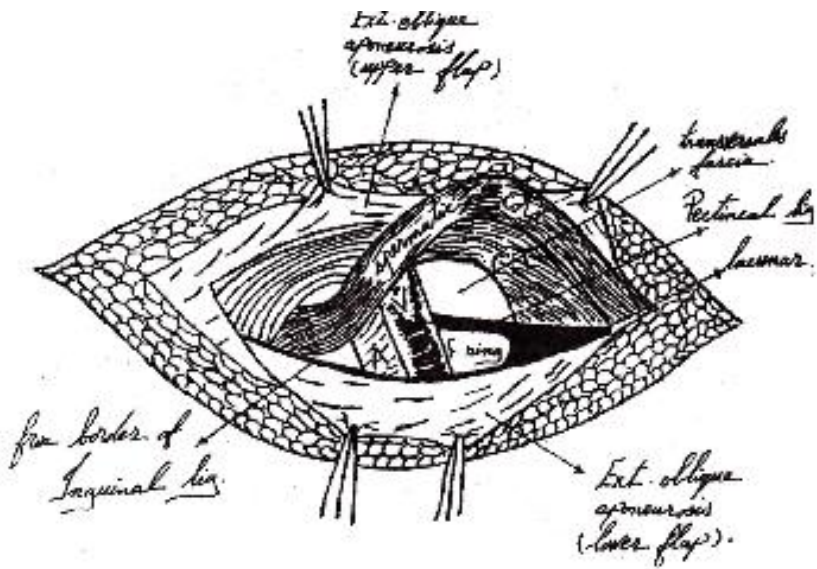


★ Descend of Femoral Hernia



★ McEvedy approach

Ext. oblique



★ Repair of Femoral Ring



## 2. **High McEvedy's approach:**

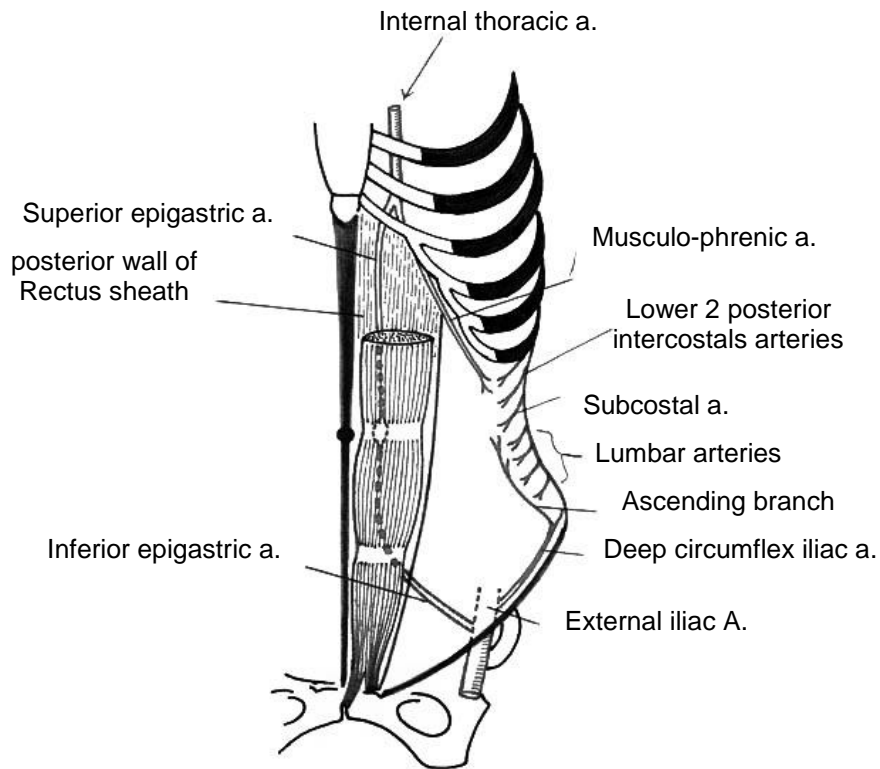
- ◆ Through an incision at the outer border of the lower part of the rectus abdominis muscle. This incision can be extended down to below the inguinal ligament to empty the sac if it is distended with the contents.
- ◆ The sac & femoral ring are dealt with as described for high inguinal approach.
- ◆ **Advantages:** Reverse of disadvantages of the other 2 operations and it is the best for **strangulated femoral hernia**

**3.Low approach:** Not used nowadays , a transverse incision 1/2 inch below and parallel to the inguinal ligament over the hernia.

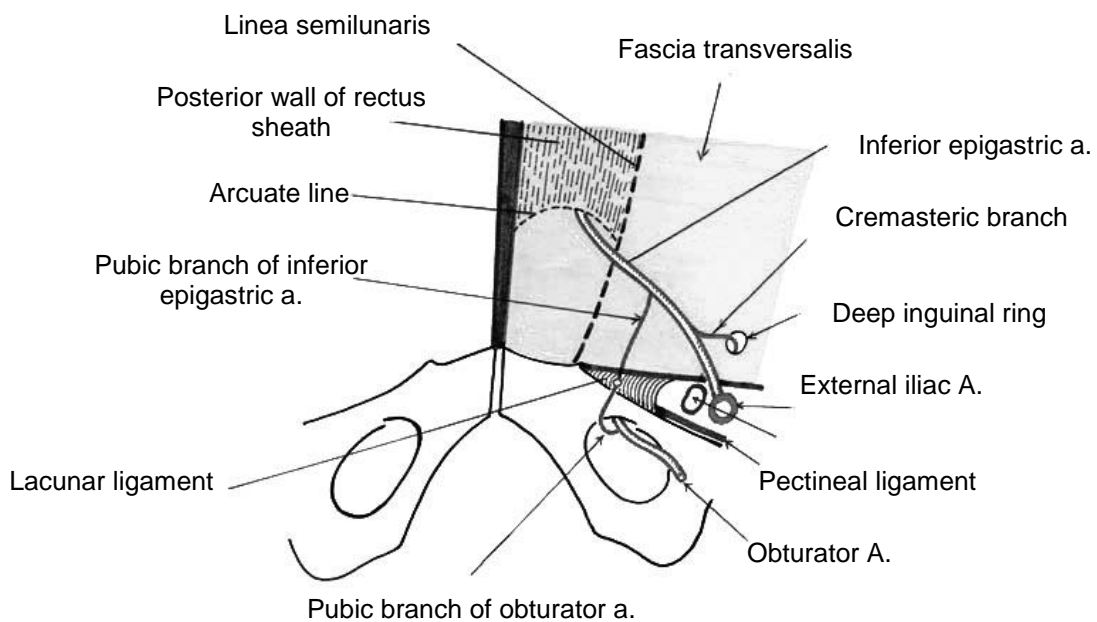
### ◆ **Disadvantages:**

- a) The sac cannot be excised at **the proper neck** → recurrence.
- b) **Strangulated bowel** can not be dealt with.
- c) **Associated inguinal** hernia can not be not dealt with.
- d) Injury to an **abnormal obturator artery** is common in strangulation if the constriction is relieved by cutting the sharp border of lacunar ligament .

**\* Arterial supply of anterior and lateral abdominal walls \***



**Inferior epigastric A.**



**Anterior abdominal wall seen from inside the abdomen (from behind)**