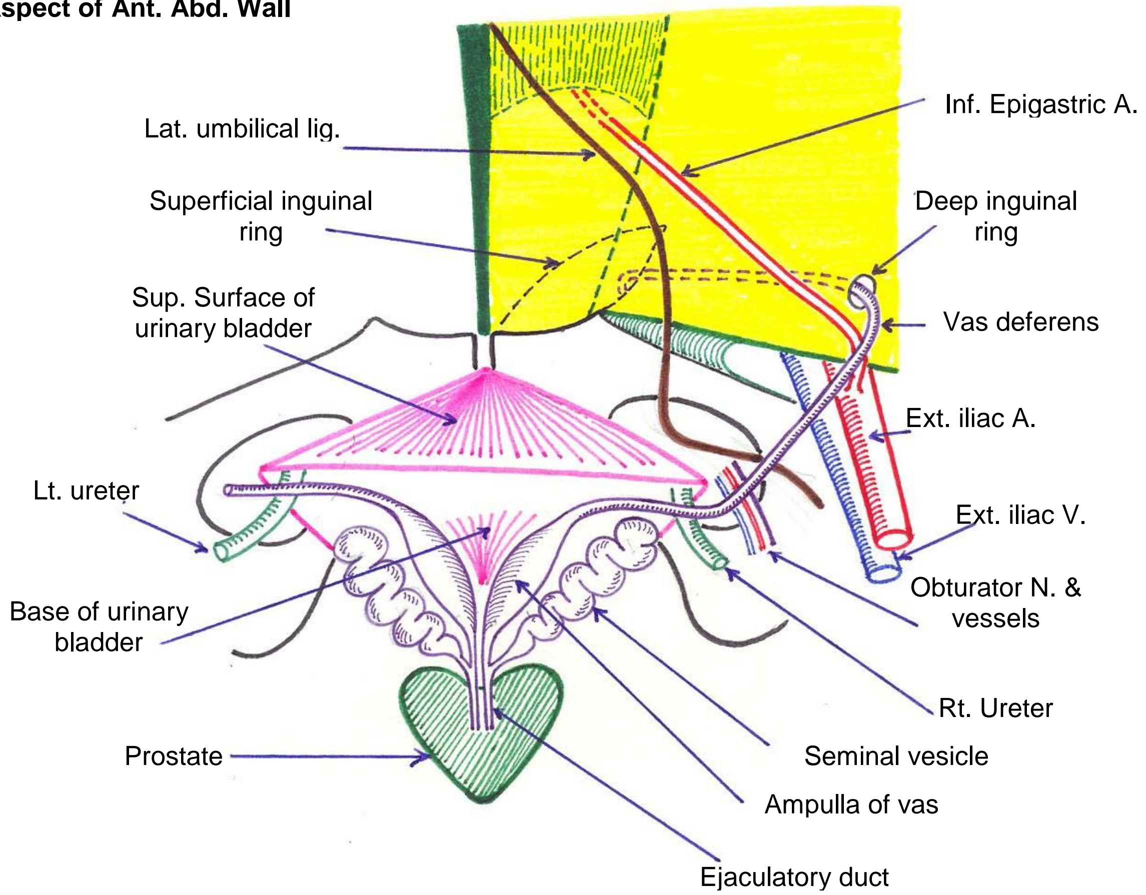
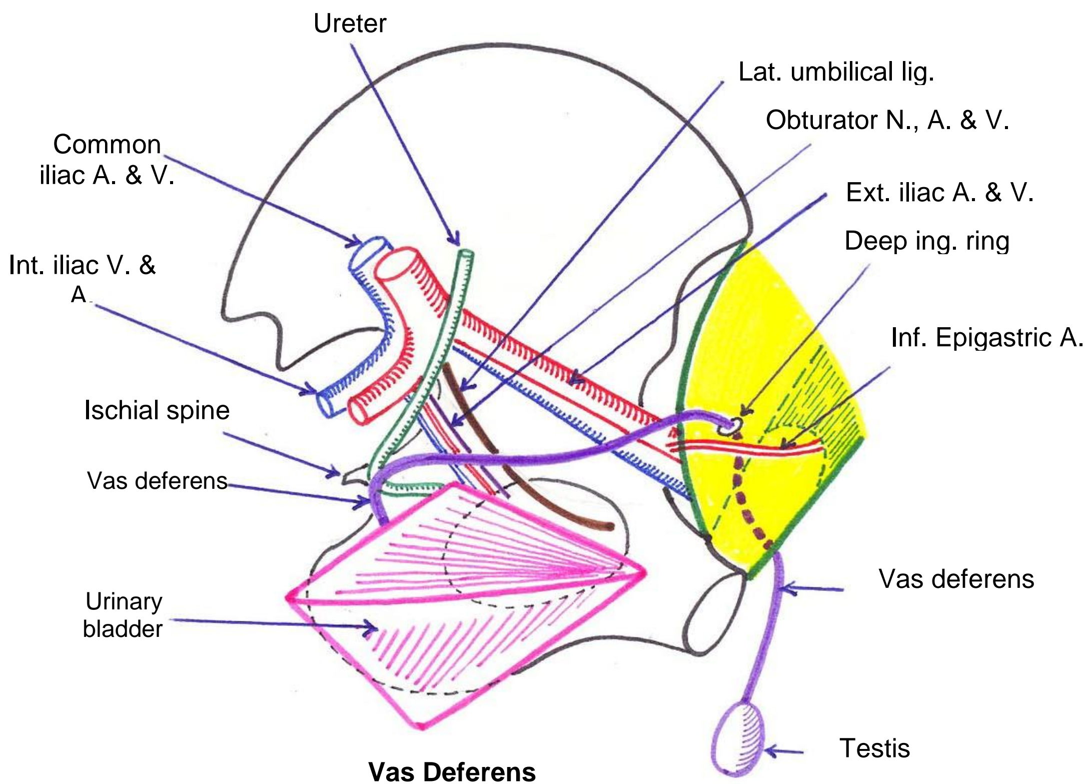
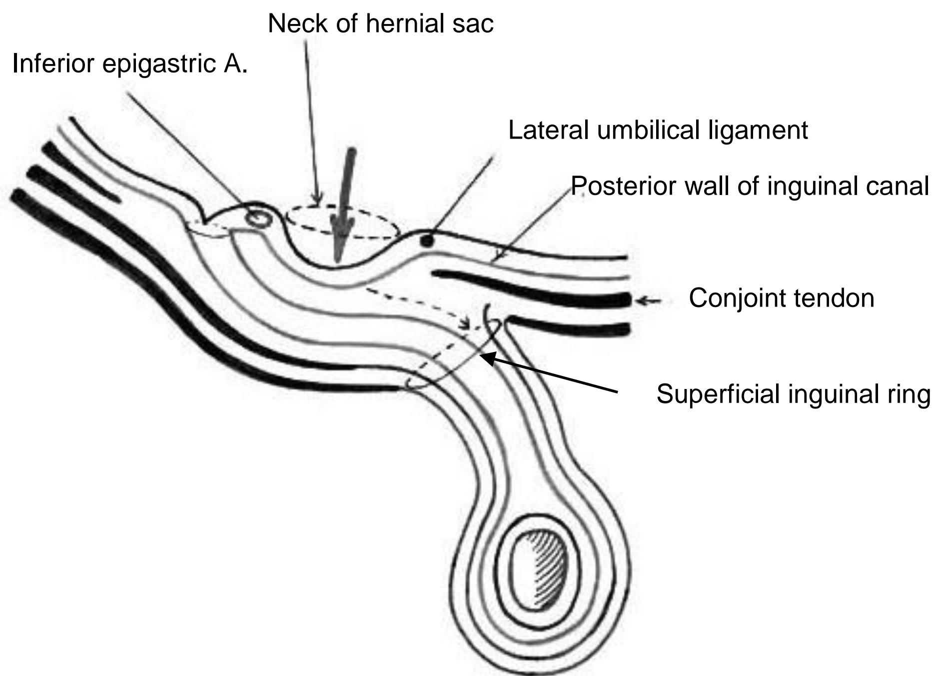
**Inner Aspect of Ant. Abd. Wall**

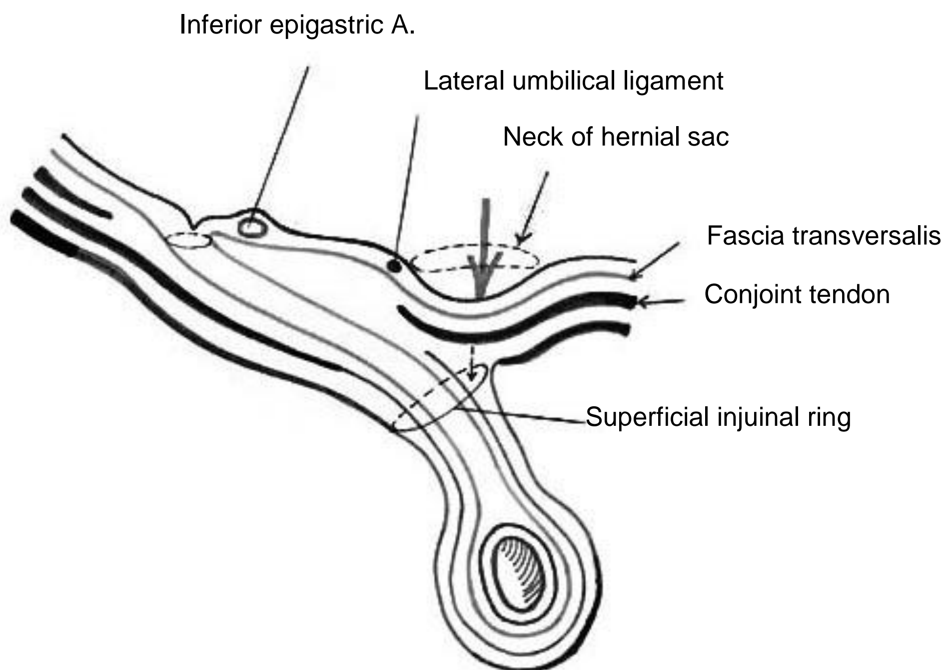



**Vas Deferens**




*** Lateral direct hernia ***




*** Madial direct hernia ***

# II- Direct Inguinal Hernia

★ **Incidence:** Much less common than oblique hernia, usually in old males.

★ **Aetiology:**

**1)** The most important is atrophy of conjoint tendon due to chronic straining or cough in old age .

**2)** Paralysis of conjoint tendon due to injury of ilio-inguinal nerve during appendicectomy operation.

★ **Pathology:**

**I) Types :**

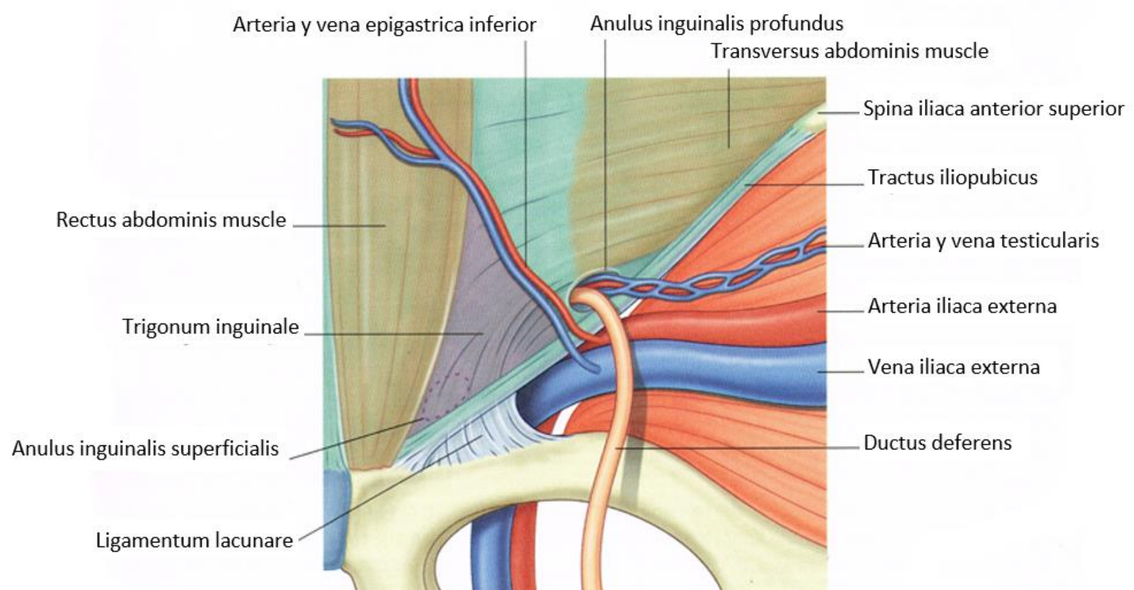
1- **Medial type :** Bulges medial to the medial umbilical ligament .

2- **Lateral type :** Bulges lateral to the medial umbilical ligament .

3- **Funicular type of direct inguinal hernia :** very rare , a very narrow necked hernia ,pass through a small defect in the medial part of conjoint tendon just above the pubic tubercle

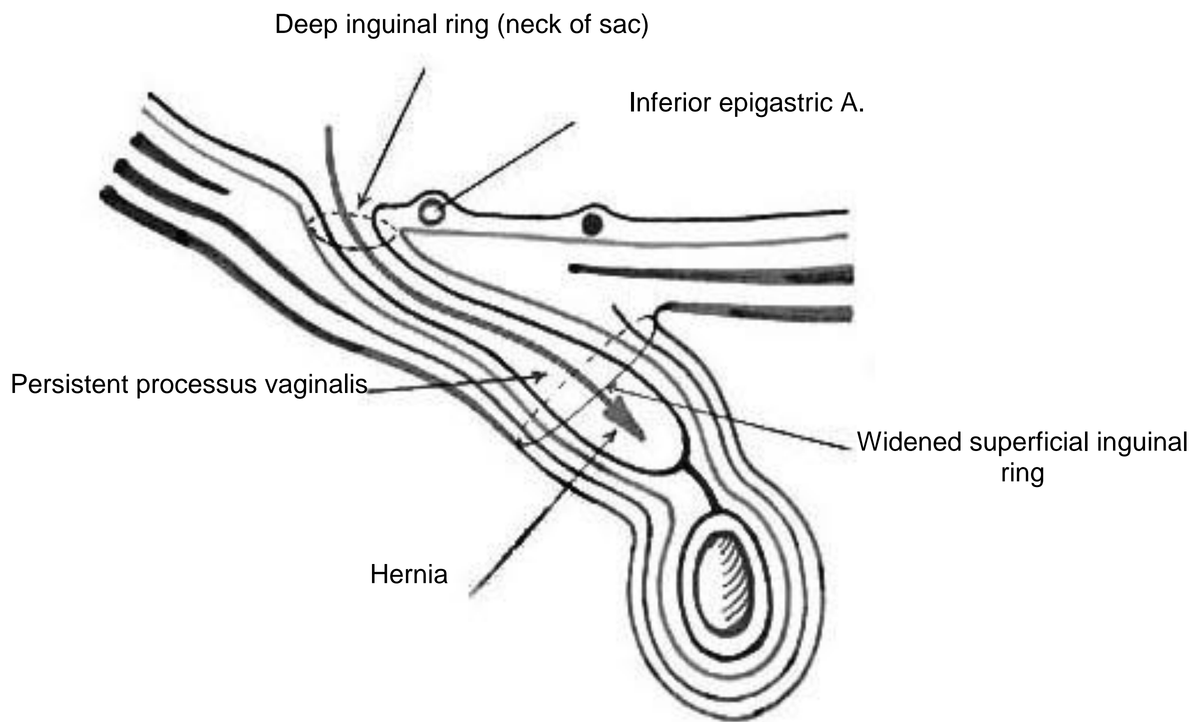
**II) Structures :**

**1.** ***Defect:*** Hasselbach's triangle.



2. ***Sac:***
   - The sac lies behind the cord & medial to the inferior epigastric vessels.
   - Usually has a wide neck (except fanicular type) $\rightarrow$ complications are rare .
3. ***Contents:*** Any viscus.
4. ***Coverings:*** skin , superficial fascia , external oblique aponeurosis , spermatic cord , conjoint tendon transversalis fascia & extra-peritoneal tissue .

★ **Complications:** Rare because it has a wide neck. (except fanicular type)




*** Oblique inguinal hernia ***

★ **Clinical picture &D.D:**

| | *Indirect inguinal hernia* | *Direct inguinal hernia* |
|---|---|---|
| **1. Incidence** | ♦ Very common | ♦ Rare |
| **2. Age:** | ♦ Any age | ♦ Usually old, never in children (Straight canal) |
| **3. Sex:** | ♦ Males are more ffected | ♦ Only in males |
| **4. Side:** | ♦ Unilateral or bilateral | ♦ Usually bilateral |
| **5. Shape:** | ♦ Pyriform | ♦ Hemispherical |
| **6. Descent:** | ♦ Forewords, medially and downwards. | ♦ Directly forewords. |
| **7. Reduction:** | ♦ Upwards, laterally and backwards. | ♦ Directly backwards. It disappears by lying flat. |
| **8. Site & size :** | ♦ Inguinal or inguino-scrotal & may attain large size . | ♦ Only small inguinal swelling except in funicular type which rich the neck of scrotum. |
| **9. Internal ring test:** | ♦ Hernia does not descend. | ♦ Hernia will descend above the inguinal ligament . |
| **10. External ring test:** | ♦ Wide ring & impulse on the tip of finger. | ♦ Normal ring & impulse on posterior aspect of the finger. |
| **11. Defect ( at operation) is the most important** | ♦ Deep ring, lateral to inferior epigastric vessels | ♦ Hasselbach's triangle, medial to inferior epigastric vessels. |
| **12. Complications:** | ♦ Common | ♦ Rare except in funicular type |

*** Treatment:**

**A.** ***Palliative:*** Small hernias in elderly people unfit for surgery are best treated by truss.

**B.** ***Surgical:*** For a large hernia, young patient or narrow neck.

a. ***Herniotomy*** Differ from that for indirect hernia in:

1. The sac lies **behind the cord** and does not pass within its coverings.
2. The sac is always **medial to inferior epigastric** vessels.
3. The neck of the sac is wide → **transfixation cannot be done**, therefore the neck is not opened & invaginated into the abdomen.

b. ***Hernioplasty*** is essential to strengthen the posterior wall of inguinal canal.