

INGUINAL CANAL

Defⁿ:-

- An oblique intermuscular passage in the lower part of ant. abdominal wall.
- Above the medial half of the inguinal ligament.

Dimⁿ:- Length: 4cm

Dirⁿ: ↓, →, •

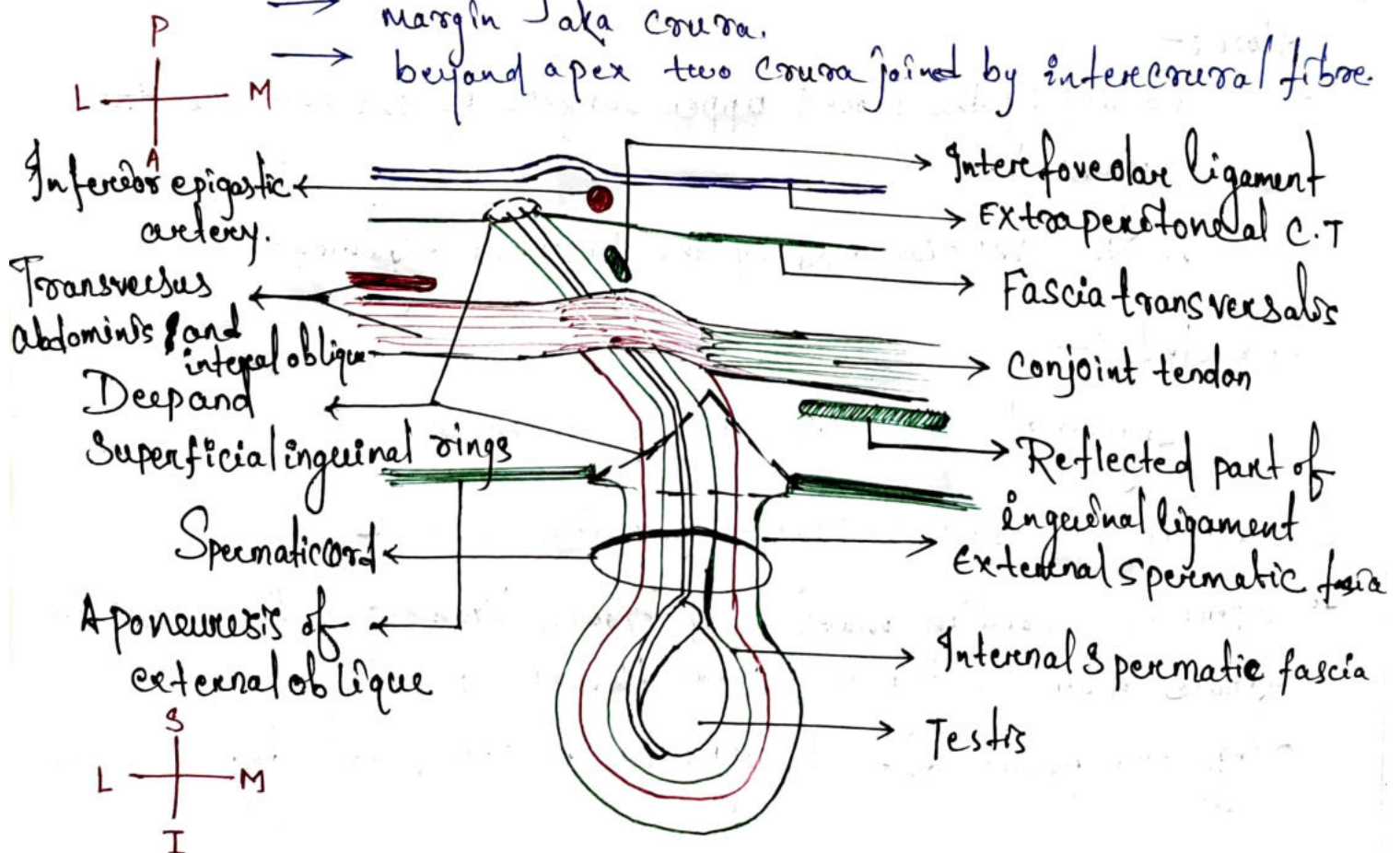
- Extended from the deep inguinal ring to superficial inguinal ring.

Deep inguinal ring:-

- oval opening at fascia transversalis
- 1.2cm above the midinguinal point.
- Related to stem of the inferior epigastric artery.

Superficial inguinal ring:-

- Triangular gap in the external oblique aponeurosis.
- Base of triangle formed by Pubic crest.
- two sides from lower and upper margins of the opening
- 2.5cm long & 1.2cm broad
- margin aka course.
- beyond apex two courses joined by intercoursal fibre.



Mechanism of Inguinal Canal :

1. Oblique of the inguinal canal — when the intra-abdominal pressure rises the anterior and posterior walls of the canal are approximated, thus obliterating the passage. flap valve mechanism.
2. The Superficial inguinal ring is guarded from behind by the conjoint tendon and by the reflected part of the inguinal ligament.
3. The deep inguinal ring is guarded from the front by the fleshy fibres of the internal oblique.
4. Shutter mechanism of the internal oblique :-
 - Triple relation
 - Ant. wall, roof and post. wall
 - like a shutter
 - The arching fibres of transversus also takes place in this mechanism.
5. Hormones may play a role in maintaining the tone of the inguinal musculature.

* How the Herniation of abdominal viscera is prevented?

At the time of intra-abdominal pressure like when coughing, sneezing, lifting weight and other activities, all these mechanisms comes into play. So that the inguinal canal is obliterated, its openings are closed & Herniation of abdominal viscera is prevented.

Development of Inguinal Canal :- (If asked)

- Represents the passage of gubernaculum through the abdominal wall.
- Extending from the caudal end of the developing gonad to the labioscrotal swelling.
- Initially the canal is short, but inc. dimⁿ as the pelvis inc. & deep inguinal ring shift laterally.

Clinical Anatomy :-

Hernia:-

Defⁿ:- It is a protrusion of any of the abdominal contents through any of its walls.

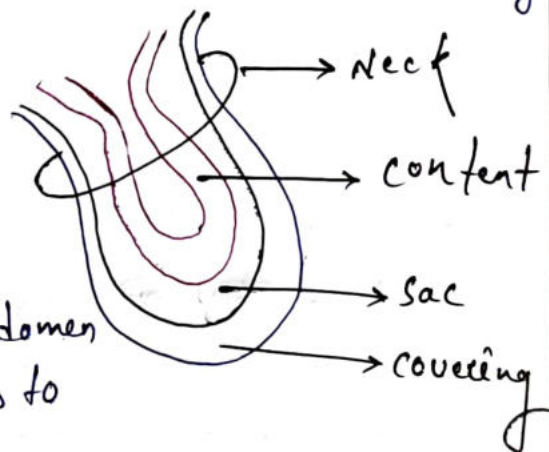
Types:-

external hernia:- when the protrusion to any abdominal wall.

Internal hernia:- when intestine protrude to abdominal cavity itself.

Contents:-

- every hernia consists of a sac, contents & coverings
- Sac is the protrusion of the peritoneum.
- It comprises of a neck, the narrowed part & a body, the bigger part.
- the contents are long mobile, keen to move out, & contents of S.I.
- Coverings are layers of abdominal wall which are covering the hernial sac.



Complication

Irreducibility:- usually the loop of intestine goes out but comes back to abdomen but when this doesn't happen, it leads to irreducible hernia.

Obstruction:-

→ ~~the~~ the loop get narrowed so that the contents of the loop cannot move forwards.

Strangulation:-

→ when the arterial supplies are blocked the the loop get necrosed.

Some examples:-

- 1 Internal hernia:- occurs in foramen of lesser sac.
- External hernia:-
- (i) Umbilical (congenital)
 - (ii) Paraumbilical
 - (iii) Femoral
 - (iv) Inguinal
 - (v) Epigastric
 - (vi) Divarication of recti
 - (vii) Groin hernia
 - (viii) Lumbar

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