Hernia

OSCE Station

Patient's Profile: Age
Occupation

Chief complaint :-
Duration :

Site :
Onset (gradual / sudden) :-

Reducible or non-reducible ?
→ Progression or regression (was it reducible and then became non-reducible)

Any size changes.

Aggrevating : → standing up.
→ Strain during defacation.
→ Coughing.

Relieved by: → lying down
→ manual reduction

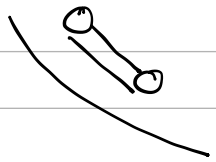
Risk factors : COPD / Asthma
weight lifting
Constipation / opstipation.
Changes in Micturition. (تكيس البول / prostatic hyperplasia)

(treat underlying cause.)

Previous Surgeries: Eg: Appendectomy → weakens the abdominal wall.

Social Hx: Smoking.

Physical Exam.



① On inspection. if the bulging is outward or the bulging is downward → In

② Ask the patient to reduce it.

③ Put your hands on both deep & superficial ring
* Ask patient to cough.
* Ask patient to stand up.

→ check the bulging
if it was:-
on the deep ring: Indirect

Complication:-

Immediate	Early	Late.
Anesthesia	SSI, wound infection.	Recurrence.
Bleeding		

numbness pain.
↖ ↗
Lap: ilioinguinal

→ Nerve damage. → open: lateral cutaneous
→ Vas deferens → sub-fertility.
→ Testicular nerve damage → atrophied testis.
→ vein damage → loss of testicular organ
→ Bowel ischemia, Bowel resection.

personal data: (name,sex,age)
Chief complain: Groin or scrotal swelling for (duration)
HPI: we treat it as a lump
1-Where is the lump? site
2-When was the lump first noticed?
3-What made you notice the lump? (pain, during washing or someone else noticed)
4-Has the lump changed since it was first noticed? (size,color, shape and tenderness) progression
5-does the lump ever disappear? What makes the lump reappear? (hernia may disappear on lying down & reappearing during exercise & straining)
6-Have you ever had any other lumps?
7-What do you think caused the lump? (hernia may follow trauma or surgery)
8-Reducibility
9-is there any other lump?
10-Associated symptoms according to the place of the lump, IF hernia? (symptoms of intestinal obstruction such as: abdominal distention, vomiting, constipation, pain) irritated child,fever,discoloration of the skin IF in the breast? Is there any discharge ? is at associated with the menstrual cycle? is it painful ? IF it in the thyroid?hyper/hypothyroidism, difficulty swallowing, breathing, hoarseness
If the patient present with pain (SOCRATES)
Ask about the predisposing factors for the hernia as: General factors: (Lifting heavy object, Chronic cough, Chronic constipation, Abdominal distention 'ascites or mass', Difficulty in passing urine.)
Constitutional symptoms: Fever, loss of appetite, loss of weight
Past medical history and surgical history. Abdominal surgery or trauma, Muscles disease, Previous lump or hernia, Wound infection postoperative.
Family history of hernia.
Drug history: ACE inhibitors " chronic cough"
Systematic review.(Neuralgia of the ilioinguinal nerve may present with a sudden stabbing pain in the distribution, we have to ask about COPD symptoms and obstructive uropathy)

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Differential Diagnoses for Inguinal masses + Lumps.

- Hydrocele
- Lipoma
- Neuroma.
- Seroma
- Sebaceous cyst.
- Direct Hernia → Femoral hernia
- Indirect hernia
- Lymphadenopathy (Enlarged LNs)
- Femoral artery aneurysm (after cath.)
- Undescendant testes → Hematoma (Hematocele).
- Torsion.

HERNIA

sac, content, neck.

repair: herniorraphy (tension-free approximation), herniectomy, hernioplasty (mesh)

↳ protrusion from the normally contained space through an opening at a site of weakness

↳ pushing through a weak spot or any opening in muscle or tissue wall.

↳ could be in the inguinal region, umbilical, paraumbilical epigastric and so on.

↳ Types of hernia

Reducible

↳ Back to it's anatomical site.

- → on it's own
- → manually by the patient.
- → hard to be reduced, yet is eventually reduced. يمكن الدكتور يرجعها

- **Complete**: hernia sac + contents protrude.
- **Incomplete**: defect is present but not necessarily with protrusion.

Irreducible

- **Strangulated**: Incarcerated with signs of ischemia + SBO + necrosis (gangrene). trapped + blood supply is cut off → Emergency
- **Incarcerated**: Imprisoned and fixed within the hernia sac ! ⇓ may cause Intestinal Obstruction. Just trapped outside with intact blood supply

Pantaloon Hernia

is a term used to describe both direct & indirect inguinal hernia on the same side

Inguinal Hernia

Above the inguinal ligament

Direct — 25%

can be reduced & don't strangulate

within Hasselbach's triangle

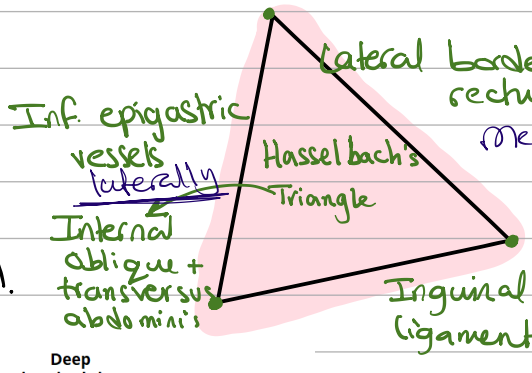
Directly bulges out of the abdominal wall.

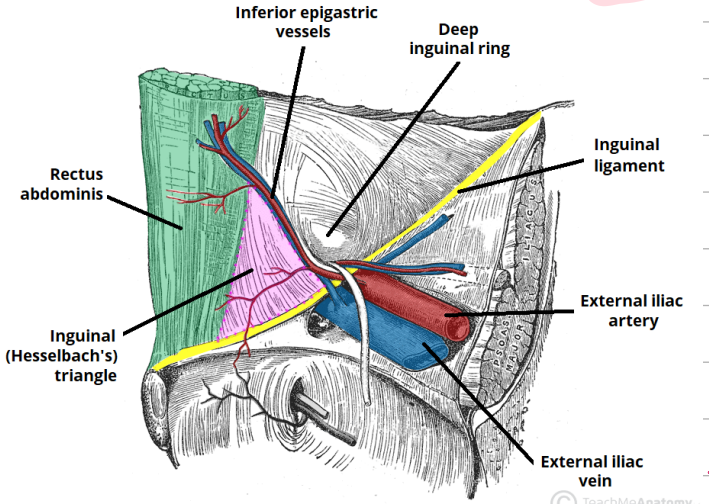
Indirect — 50%

lateral to Hassel bach's triangle

Through the internal ring → follow the route of the spermatic cord.

⚠ Strangulate.





→ Inguinal hernias are more common in the right side.

* Embryological: delayed descent of testes in the right side → delayed closure of the right sided canal. (remain open slightly longer)
* Anatomical factors.

→ But both protrude from the superficial inguinal ring.

Patent Processus Vaginalis

1° cause of indirect inguinal hernia as it provides a way of forming it. It is a part of peritoneum that descends with the testes to the scrotum, or with the round ligament to the labium, then it obliterates. If passes through the inguinal canal, so if it didn't obliterate → provide a pathway for herniation.

Incisional hernia — Ventral

at the site of previous surgery

Femoral hernia

Below inguinal ligament, in the femoral canal (artery, vein & lymph) (F > M) → irreducible & strangulate & SBO.

Epigastric hernia

on the linea alba line.

Umbilical hernia — Ventral

Contain omentum.

Signs & Symptoms

Visible lump
discomfort + pain
constipation

enlargement w/ increased abdominal pressure eg: coughing

⚠ If complicated: Fever, Erythema, Tenderness.

Risk factors

Hx. of previous hernia.
Hx. of previous surgeries
smoking
older age
Chronic cough
Chronic constipation → straining
Abdominal wall weakness

Treatment

→ Surgery: Herniorrhaphy (open or laparascopic)

A mesh (synthetic or biologic) is applied to strengthen the abdominal wall → Hernioplasty

↓ recurrance rate
↓ recovery period

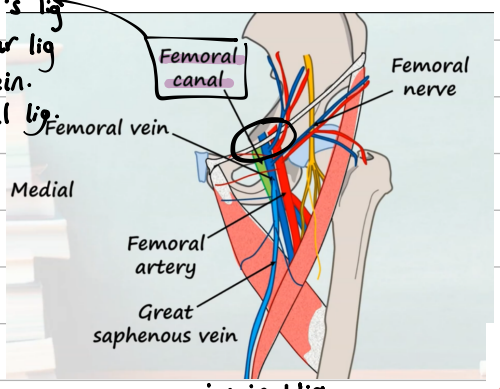
↳ Foley Catheter is used during surgery to manage the bladder content and prevent it from distension (block the operative field), also keeping the bladder empty reduce its potential interferance in surgery due to it's close proximity.

Anatomical Note

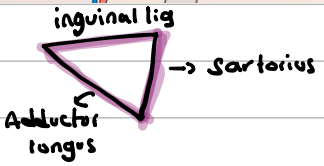
Femoral Region

Below inguinal ligament

post: Cooper's lig
med: lacunar lig
lat: fem. vein.
ant: inguinal lig.



Femoral Triangle



Inguinal Region.

above inguinal ligament

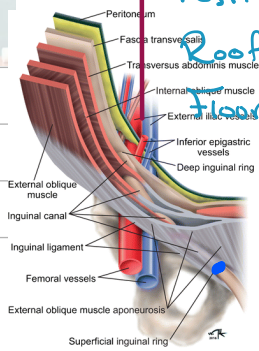
Inguinal Canal: Deep → Superficial

Deep: internal opening at the transversus fascia.

Superficial: external opening at the aponeurosis of external oblique

Boundaries:

Ant. wall → external + internal oblique
Post. wall → transversalis fascia + Conjoint tendon
Roof → internal + transversus
floor → inguinal + lacunar lig.



superficial inguinal ring → pubic Tubercle.

Content of spermatic cord.

3 layers:- External spermatic, cremasteric, internal spermatic

2 contents:- vas deferens, Pampiniform plexus,

3 arteries: testicular, cremasteric,

3 nerves: ilio inguinal

Other Types of Hernia

Diaphragmatic hiatus hernia

protrusion of any abdominal organ into the chest

Causes & Risk factors

→ ↑ increase in intra abdominal pressure
- ↳ obesity
- ↳ pregnancy.
- ↳ Coughing
- ↳ Valsalva
- ↳ chronic constipation.

→ ↓ muscle elasticity

→ Previous surgeries

→ Seat belt trauma.

Symptoms

- ↳ Asymptomatic.
- ↳ Heartburn
- ↳ Regurgitation. Acidity, belching.
- ↳ Chest pain + dyspnea
- ↳ Bowel obstruction. (volvulus)

PPI
H2 blockers
or anti-acids

DX

- ↳ Barium
- ↳ Endoscopy
- ↳ Manometry
- ↳ pH if high.
- ↳ Auscultation: bowel sounds in chest.

Hour glass

Types

Sliding >90%
GE junction herniates through esophageal hiatus.

⚠ Acid reflux
Esophagitis

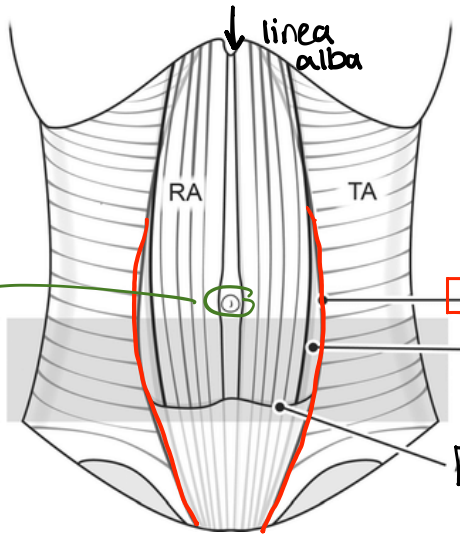
Para - >5%
esophageal part of the fundus herniates

⚠ obstruction
strangulation
incarceration.

Type III
both Sliding & paraesophageal

Type IV
herniation of other parts rather than stomach.

Spigelian Hernia



here where herniation occurs → Spigelian Belt

↓

infraumbilical

↳ below the arcuate line there's no rectus sheath posteriorly, so it's a weak region.