Groin Hernia- Clinical features and Management

Learning Objectives

- At the end of the discussion a student should be able to understand:

1. The features of the given history which support the diagnosis
2. The clinical examination
3. The differential diagnosis
4. What investigations would be most useful and why
5. What treatment options are appropriate

Case 1

I’ve developed a lump in my groin’

A 25-year-old builder suddenly develops a golf-ball-sized, slightly tender lump in his right groin after lifting a 20-kg bag of sand. He states that he felt a tearing sensation as it happened. He attends the emergency department.

Case 2

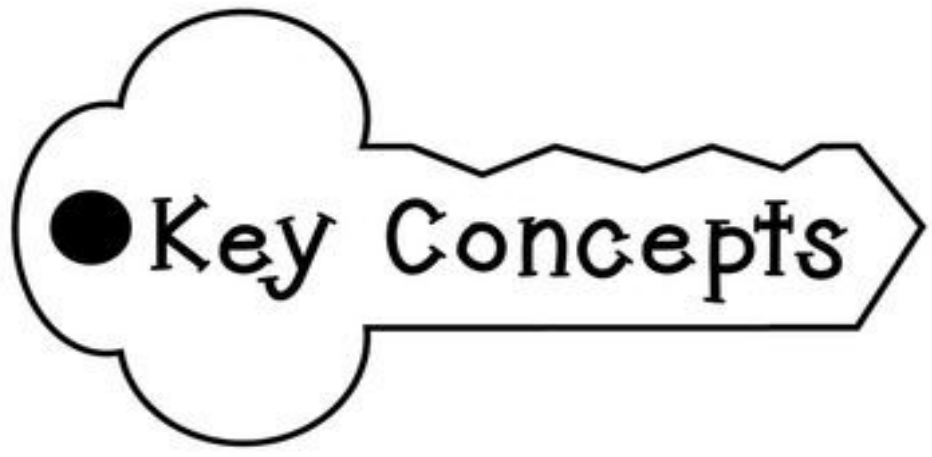
‘I can’t push my lump back in anymore’

A 70-year-old retired man presents to surgical outpatient clinic with a slightly tender lump in his left groin. He has had the lump for many months, but previously it would disappear overnight, or if necessary he could gently push it back inside. His health is fine, other than a cough from years of smoking. Over the last 2 weeks he has not been able to reduce the lump.

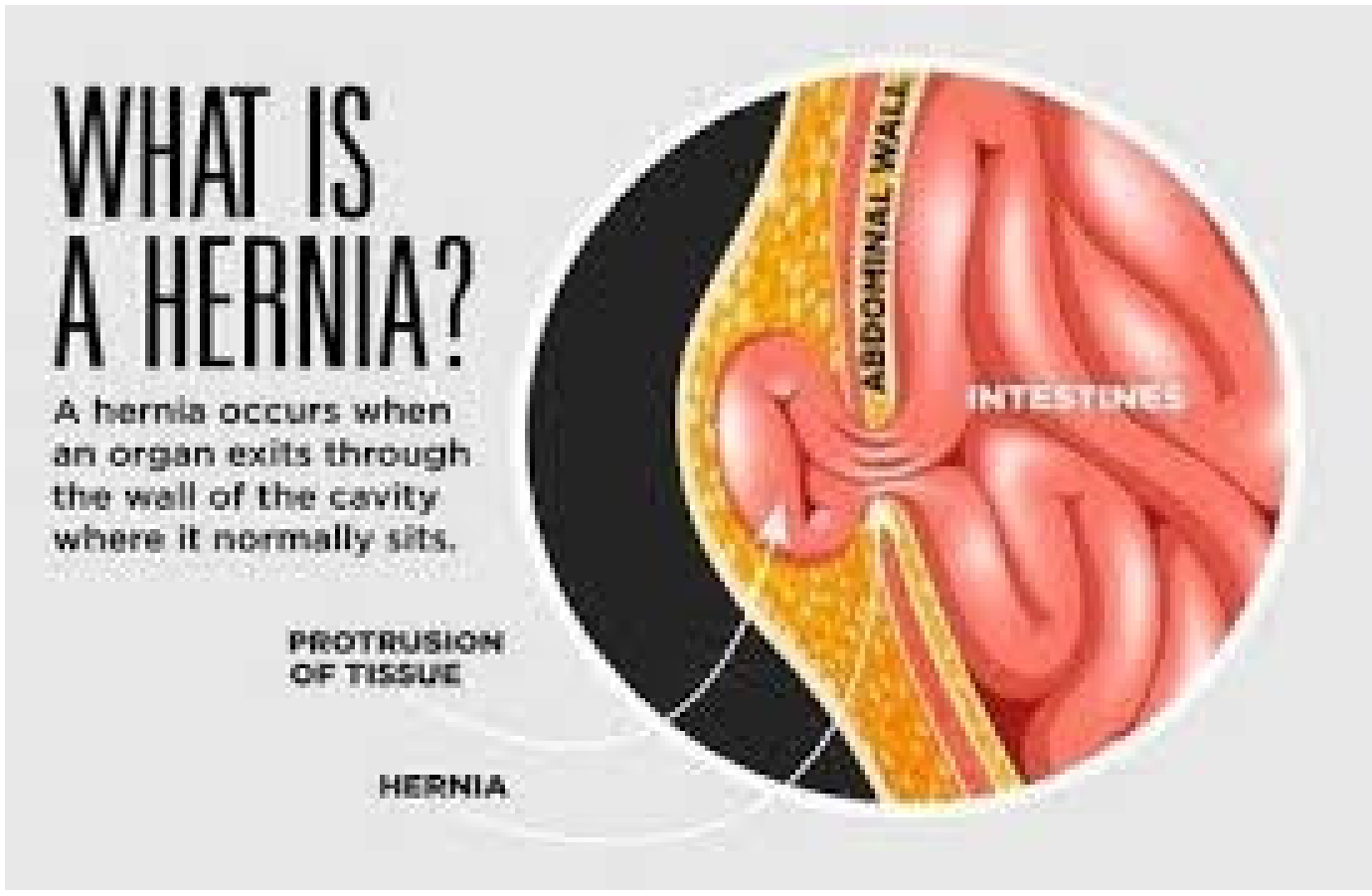
Case 3

‘My hernia is sore and I’ve started to vomit’

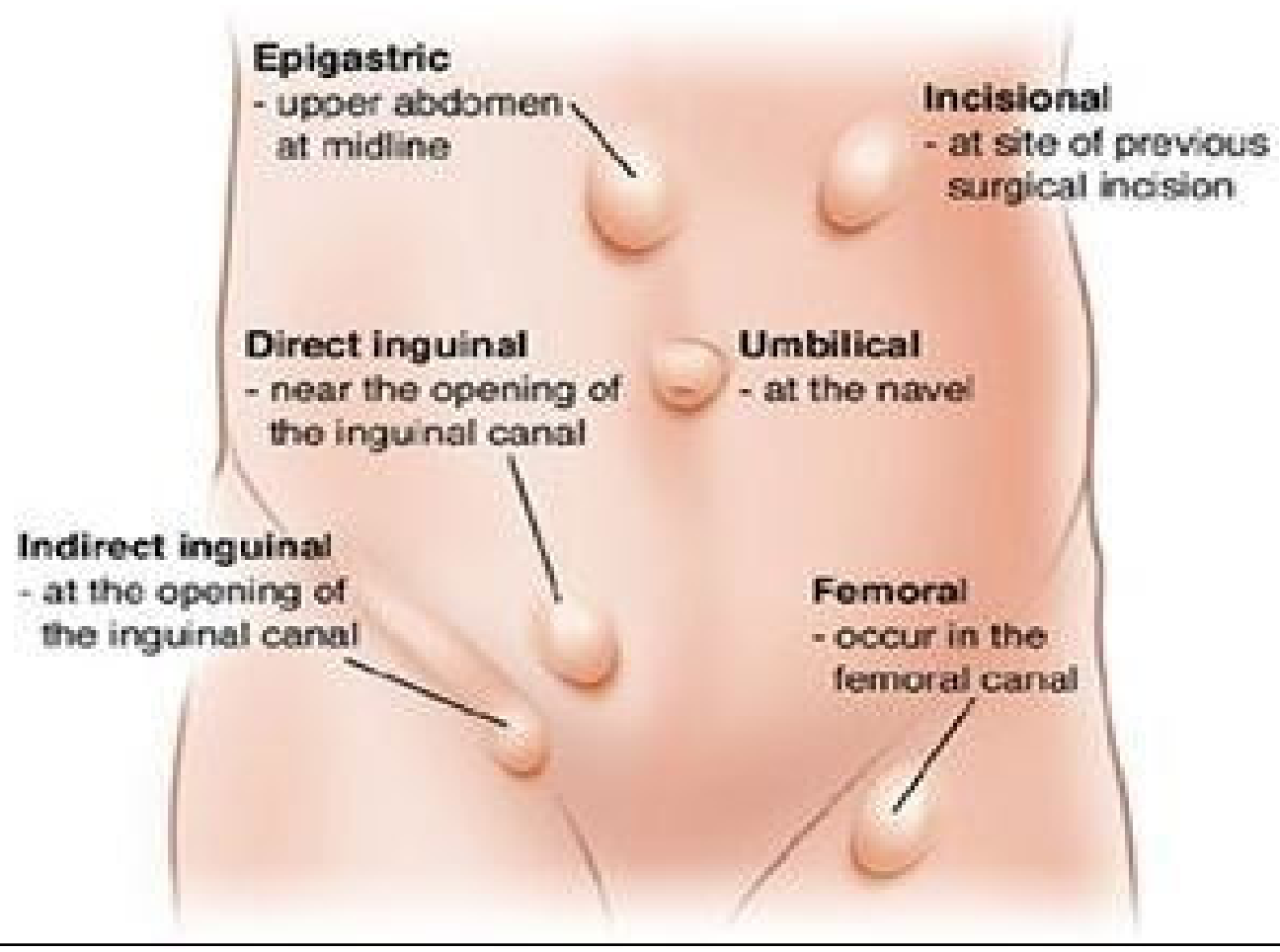
A slim 73-year-old woman has had a groin lump for some time which she ignored. Over the last 3 days it has become progressively more painful, with redness of the overlying skin. She has not passed stools or flatus during this time (which is unusual for her), and yesterday she started to vomit.



What is a hernia?



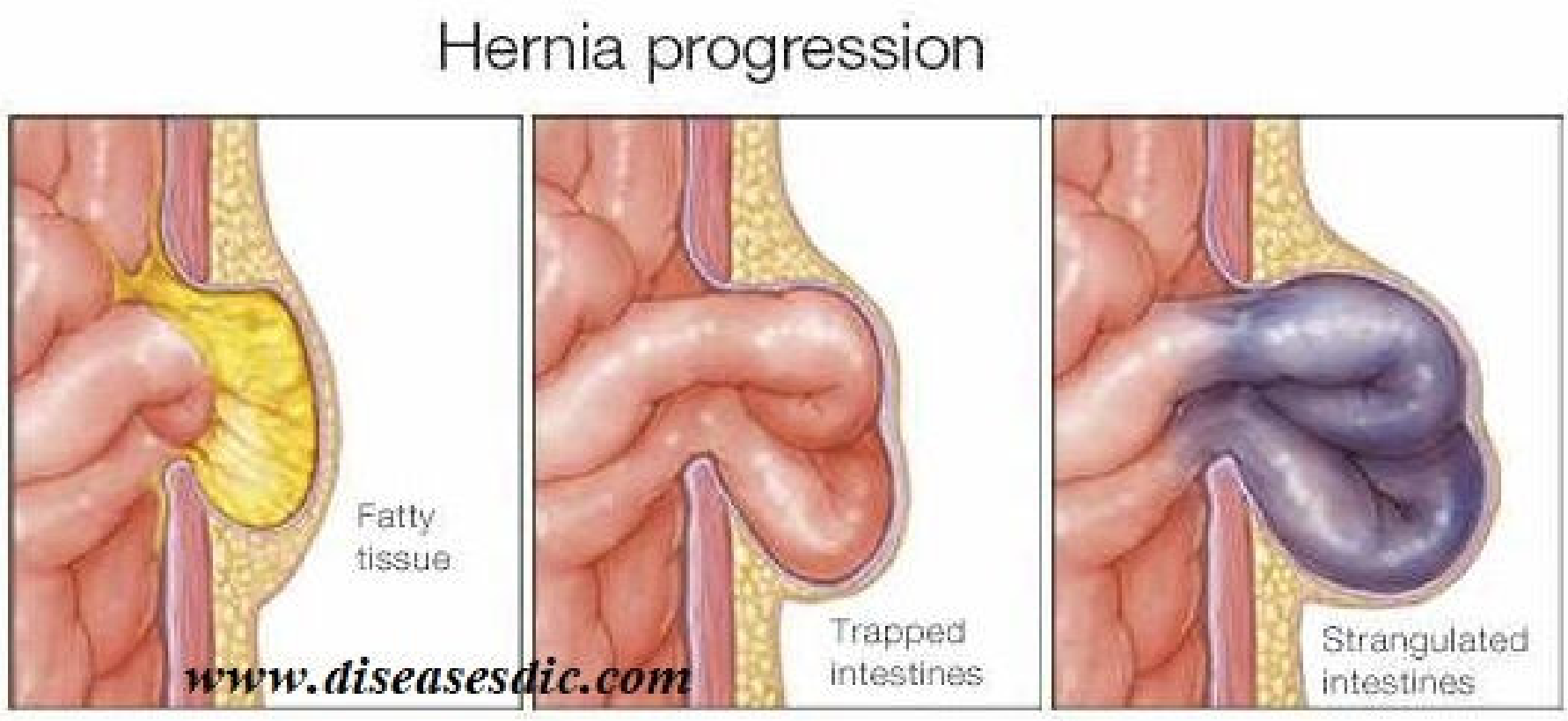
Where do they occur?



What can they contain?

- Omentum and small bowel
- Meckel’s diverticulum
- Appendix

Why are they important?



Case 1: I've developed a lump in my groin'

What is the likely differential diagnosis?

- Inguinal hernia
- Femoral hernia
- Enlarged inguinal lymph node
- Lipoma
- Less likely: groin abscess, epididymitis, undescended testis, saphena varix, femoral artery aneurysm, psoas abscess, tumour

Case 1:'I've developed a lump in my groin'

What features of the given history support the diagnosis?

- Heavy exertion
- Tenderness
  - acute onset hernia
  - enlarged lymph node or psoas abscess (signs of systemic illness would also be expected)

Case 1– ‘I’ve developed a lump in my groin’

What additional features in the history would you seek to support your diagnosis?

- Past H/O hernia
- Family H/O hernias
- Past surgical history
- Has he been otherwise well?

Case 1 – ‘I’ve developed a lump in my groin’

What clinical examination would you perform and why?

- Examine the groins and external genitalia.
- Cough impulse and reducibility
  - Indirect
  - Direct
- Distinguishing between the two types makes no difference to treatment

Case 1 – 'I've developed a lump in my groin'

What investigations would be most useful and why?

- CBC
- Ultrasound

Case 1– 'I've developed a lump in my groin'

What treatment options are appropriate?

- Surgical:
  - The most common approach for repair is still an open operation
  - laparoscopic repair for recurrent, bilateral and unilateral inguinal
- Permanent synthetic mesh is implanted
- Laparoscopic repair requires a general anaesthetic, while open repair can be performed under local anaesthetic
- For unilateral primary groin hernias, the approaches have similar recurrence rates, similar disability times, and similar costs

Case 2 – ‘I can’t push my lump back in anymore’

What is the likely differential diagnosis?

- Inguinal hernia
- Femoral hernia
- Enlarged lymph node (infection, metastatic tumour)
- Femoral artery aneurysm
- Saphena varix

Case 2 – ‘I can’t push my lump back in anymore’

What features of the given history support the diagnosis?

- A previously reducible groin mass which is no longer so is a very clear history of a groin hernia

Case 2 – ‘I can’t push my lump back in anymore’

What additional features in the history will support your diagnosis?

- Ask about urinary symptoms –BPH
- Increases the risk of post-operative acute urinary retention

Case 2 – ‘I can’t push my lump back in anymore’

What clinical examination would you perform and why?

- Examine both groins and external genitalia
- Perform a digital rectal examination (DRE) to exclude BPH

Case 2 – ‘I can’t push my lump back in anymore’

What investigations would be most useful and why?

- Ultrasound may be useful to differentiate between clinically unclear entities.

Case 2 – ‘I can’t push my lump back in anymore’

What treatment options are appropriate?

- Surgical: early elective repair is indicated

Case 3 – ‘My hernia is sore and I’ve started to vomit’

What is the likely differential diagnosis?

- Inguinal hernia, with ischaemia and bowel obstruction
- Femoral hernia, with ischaemia and bowel obstruction
- Psoas abscess
- Infected lymph node

Case 3 – ‘My hernia is sore and I’ve started to vomit’

What features of the given history support the diagnosis?

- Recent change in the groin lump
- Vomiting and constipation
- A femoral hernia is more likely to cause ischaemia as a result of the tight neck of the femoral canal

Case 3 – ‘My hernia is sore and I’ve started to vomit’

What additional features in the history would you seek to support your diagnosis?

- Exclude infections that would drain to the inguinal lymph nodes
- Local inflammation could explain the erythema of the skin and tenderness of the lump
- Systemic sepsis can secondarily cause paralytic ileus that would cause vomiting

Case 3 – ‘My hernia is sore and I’ve started to vomit’

What clinical examination would you perform and why?

- Examine the groin carefully
- Femoral hernias are seen more commonly in women than men
- Femoral hernias are felt below and lateral to the pubic tubercle
- Approximately 40 per cent of femoral hernias present with strangulation

Case 3 – ‘My hernia is sore and I’ve started to vomit’

What investigations would be most useful and why?

- A plain abdominal x-ray
- An ABG test may show a metabolic acidosis and raised lactate, suggesting ischaemia
- Other investigations will be directed at readying the patient for emergency surgery

Case 3 – ‘My hernia is sore and I’ve started to vomit’

What treatment options are appropriate?

- **Medical:**
  - fluid resuscitation
  - nasogastric tube reduces the risk of vomiting and aspiration
- **Surgical:**
  - emergency surgery is needed
  - lower midline laparotomy,
  - any non-viable bowel will need to be resected
  - repair of hernia

OSCE Counselling case 1 – **'Should I have my hernia repaired?'**

- Risks of treatment Vs Risk of not treating the hernia
- There is strong consensus that groin hernias should usually be repaired

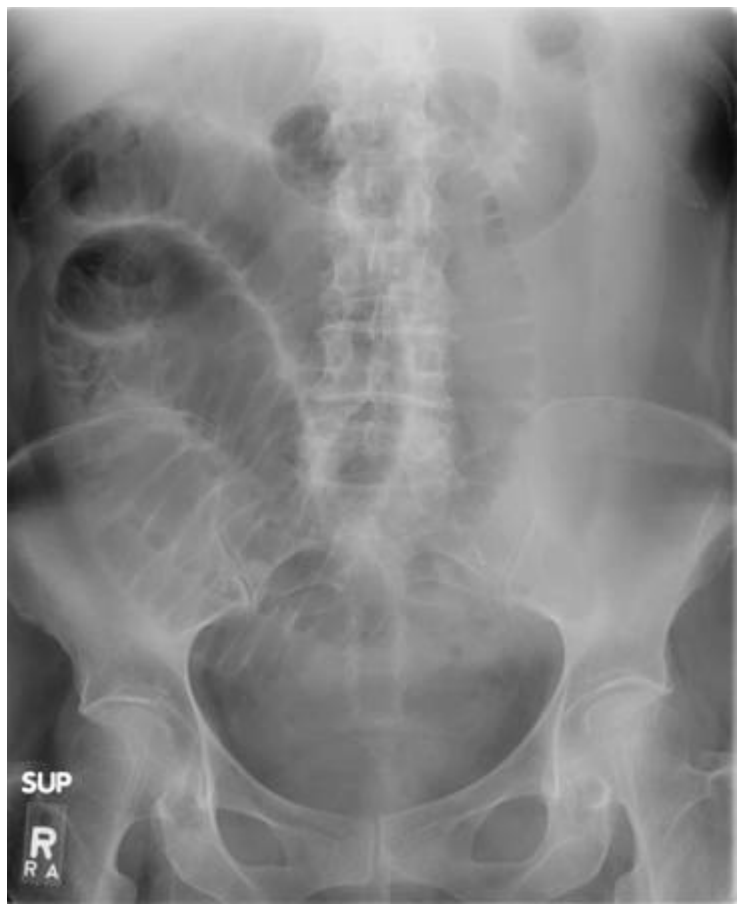
OSCE Counselling case 1.2 – **'Why did my surgeon suggest I see a urologist first?'**

- H&E
- PSA
- TRUS
- Prostate biopsy if necessary
- Cystoscopy to assess the bladder and prostatic urethra
- Medications may be all that are required to manage the symptoms
- TURP may be required
- This assessment and treatment is best performed prior to uncomplicated elective hernia repair

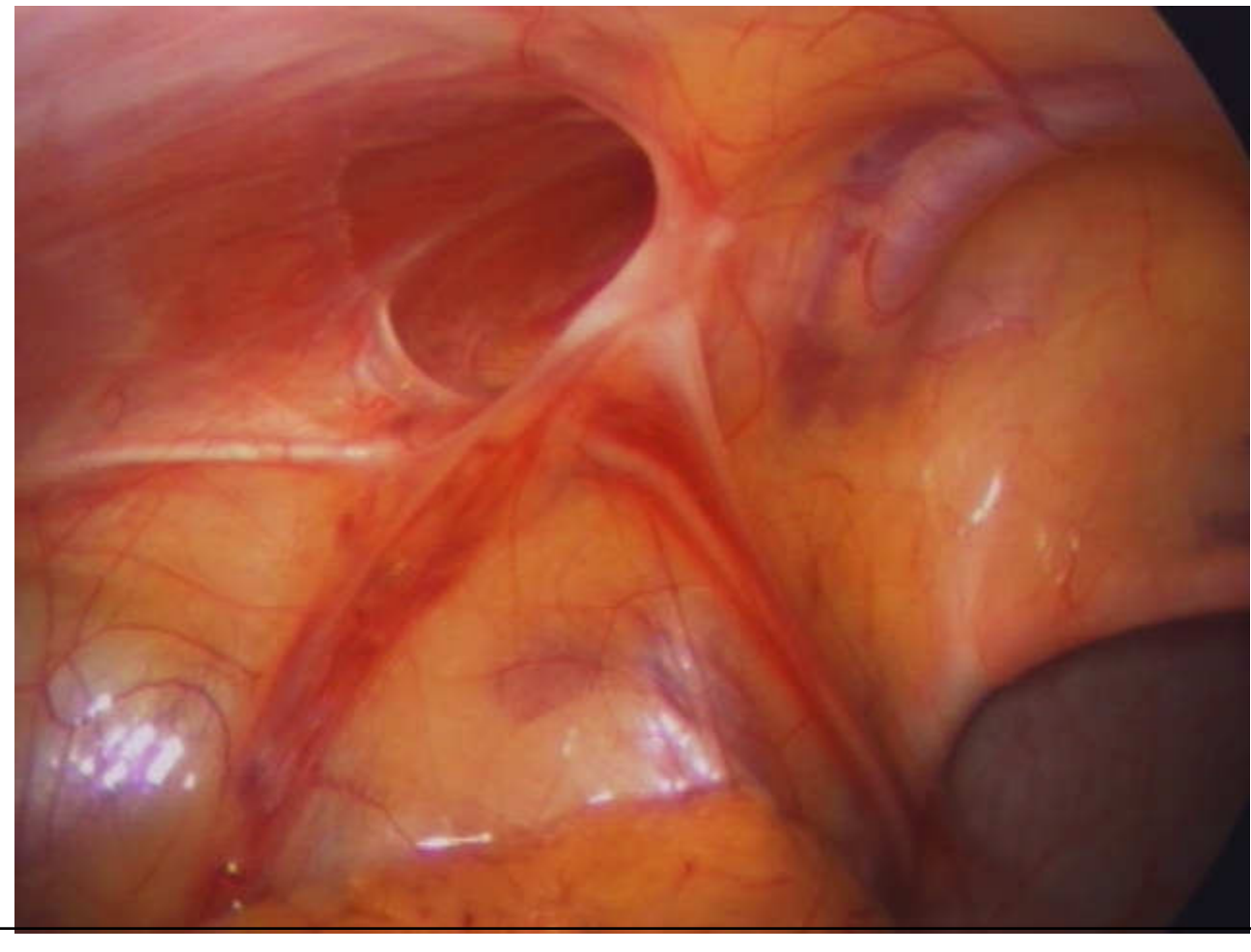
An 80-year old woman has lost several kgs over the last 3 months. For the last 3 days she has not been able to eat anything, has been vomiting, and was found in bed this morning confused and quite ill. Her abdominal exam is fairly unremarkable without any previous scars.

- This woman likely has an obturator or possibly a femoral hernia.
- Obesity can make examination of the groin difficult.
- Her management is much different than the previous case.

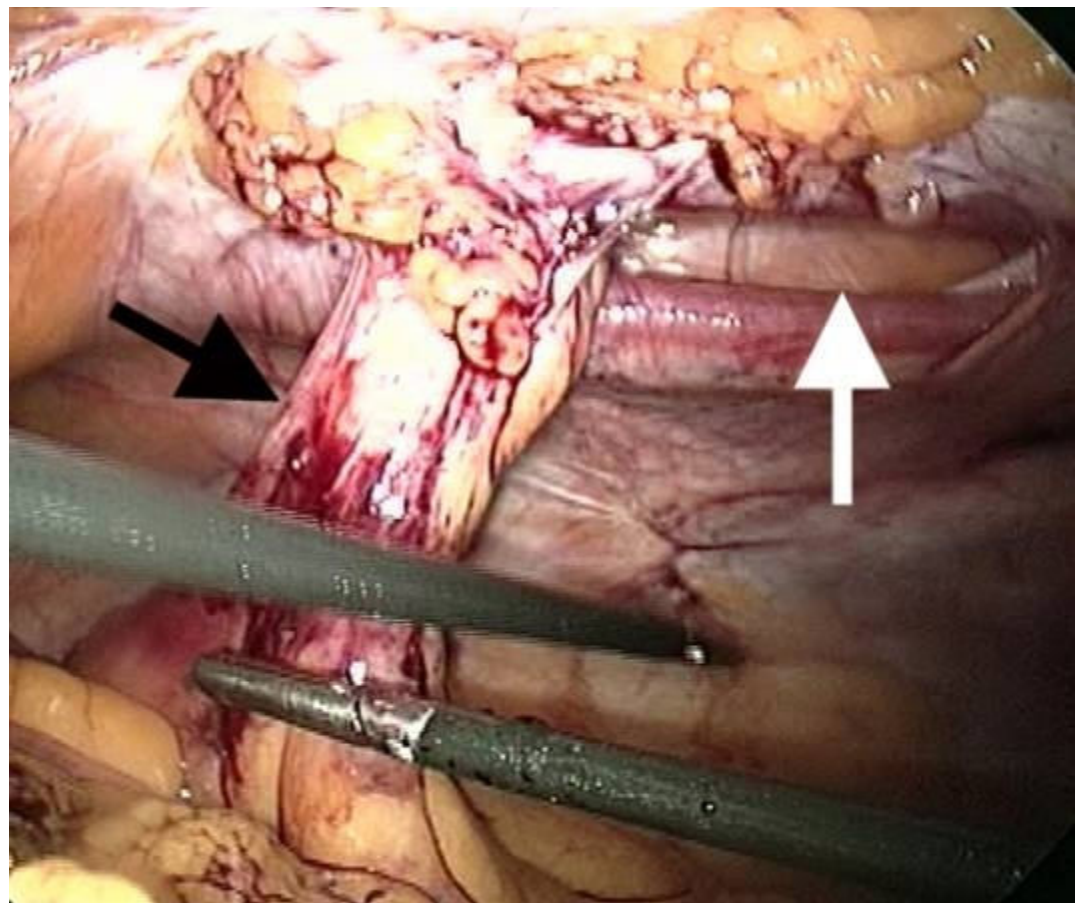
Management



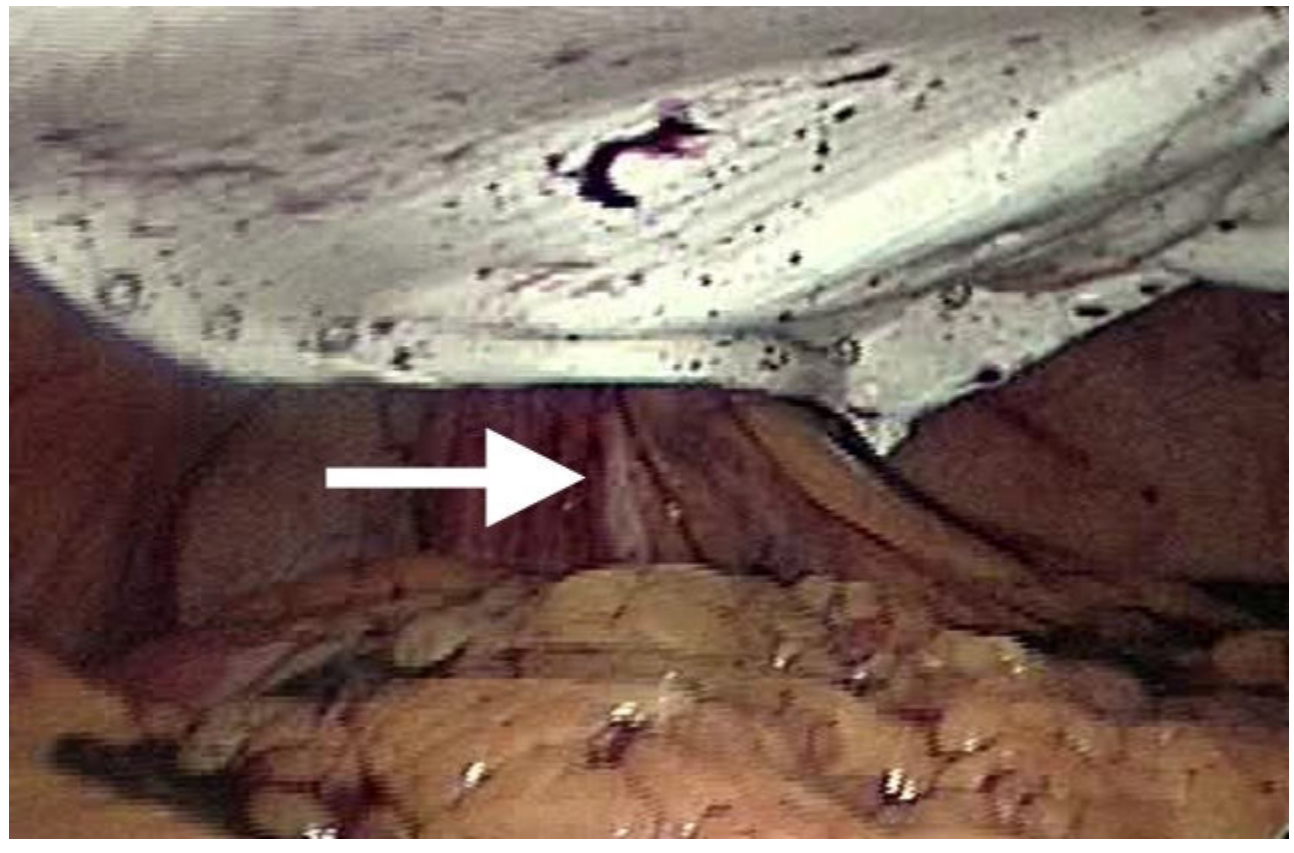
- Plain films of the abdomen should also be obtained, as the patient may have a bowel obstruction due to small bowel incarceration in the hernia.
- How might this change your management?



Laparoscopic Hernia Reduction



Laparoscopic Repair



Conclusion

- Hernias should usually be surgically repaired when present, in order to treat symptoms of discomfort, and to reduce the risk of serious complications.
- Ultrasound is sometimes required to diagnose atypical hernias (or hernias in unusual sites), and to exclude conditions that may mimic hernia, such as lymphadenopathy.
- Hernia repair may be open or laparoscopic. Each method has specific advantages and risks, which should be discussed with the patient. Neither has a fundamental advantage over the long term.
- Patients who present with bowel obstruction should be checked for hernia as a possible cause.
- Chronic pain is an under-recognized complication of hernia repair, and may occur in up to 10 per cent of patients.