NHS England

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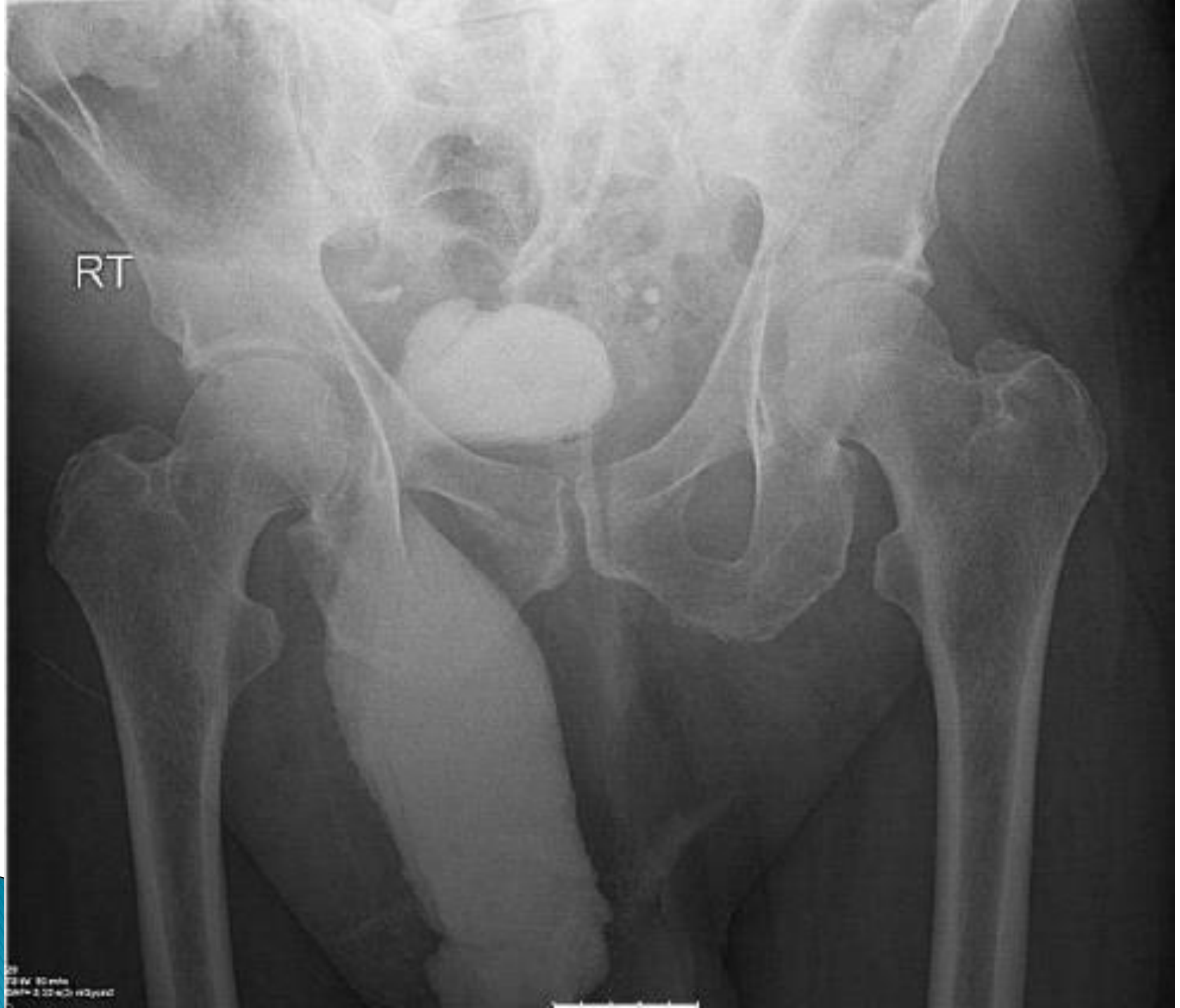
Inguinal hernia: Always a benign condition?

Low, SBL; Boctor, DSZM; Suliman, IGI

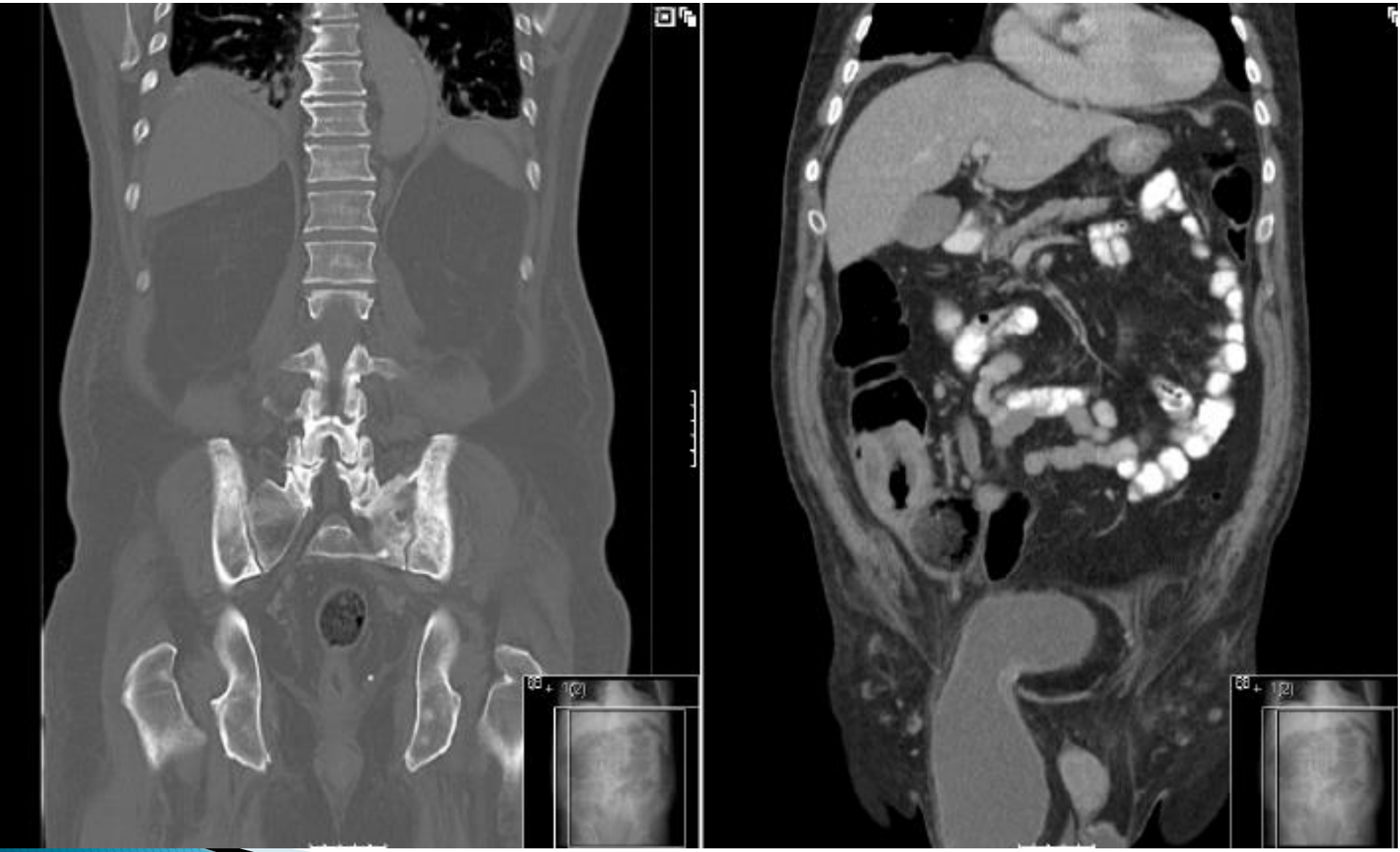
Mr JH

- 74 ♂ → ED c/o pleuritic chest pain and hip pain
- CTPA = bilateral consolidations
- Hip XR = residual contrast in the bladder which had herniated into his right scrotum


RT

Mr JH

- 2 yr hx of intermittent groin swelling, LUTS and compressing his scrotum for complete bladder emptying
- CT = bladder hernia, sclerotic bony metastases and a caecal tumour
- Treatment = right hemicolectomy + hormonal therapy



Introduction

- Herniation: Protrusion of part of bladder through abdominal wall or pelvic floor

- Important to diagnose as:
  - Increase risk of intra- and post-operative complications (if diagnosis not made pre-operatively)
  - Association with underlying malignancy

Epidemiology

- Prevalence 0.3 – 3%; 1 – 4% of inguinal hernia cases
- 50 – 70 years old ♂
- Right-sided
  - Inguinal canal (70%); Femoral canal (27%); Obturator foramen; Ischiorectal fossa; Abdo wall
- Varying sizes but usually small ‘knuckle’ of herniated bladder

Aetiology

- Abdominal/ pelvic wall weakness
- Abnormal width of the inguinal canal
- Abnormal bladder wall 2° bladder outlet obstruction
- Peritoneal fibrosis/ adhesions
- Obesity

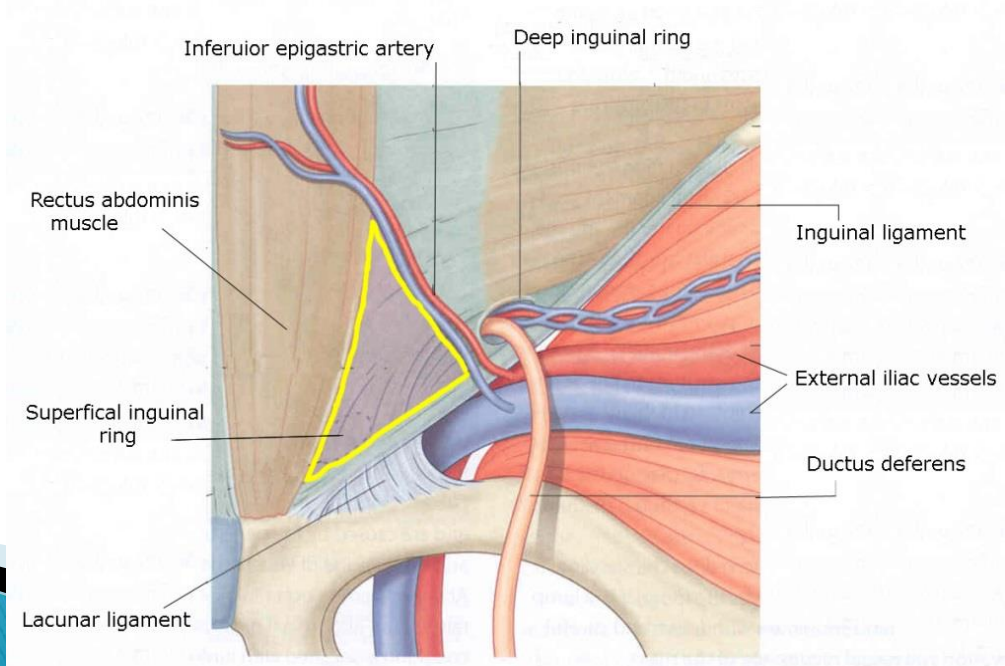
Classification I

- Paraperitoneal (most common)
  - Portion of parietal peritoneum herniates along with bladder
- Extraperitoneal
  - Peritoneum is intact and in place
- Intraperitoneal
  - Herniated part is surrounded completely by peritoneum

Classification II

- Indirect (via patent processus vaginalis)
  - Protrude lateral to inferior epigastric vessels

- Direct (through Hesselbach triangle)
  - Protrude medial to inferior epigastric vessels



Clinical features

- Most asymptomatic
- LUTS
  - Dysuria, ↑ frequency, urgency, difficulty in voiding, nocturia, hematuria
- Severe
  - 2-stage micturition (Mery's sign)

Associated pathologies

Table 2 Associated pathologies seen together with bladder herniation

	No./cases, references
Bladder carcinoma	9 [4, 30, 31, 32, 33, 34, 35, 36]
Prostate carcinoma	3 [20, 37 (2 cases)]
Neoplasm	1 [38]
BPH	7 [16, 35, 37, 38, 39, 40, 41]
Bilateral hydronephrosis	6 [1, 42, 43, 44, 45, 46]
BH + Acute renal failure	6 [41, 42, 43, 44, 45, 46]
Strangulation	3 [37, 47, 48, 49]
Necrosis	3 [2, 12, 50]
Lithiasis in bladder	3 [42, 51, 52]
Vesicouretheral reflux	3 {52, 53, 54, 55]
Scrotal abscess	1 [31]

BH = Bilateral hydronephrosis, BPH = Benign prostate hyperplasy

Diagnostic Imaging

- CT Best diagnostic clue
  - Demonstration of protrusion through hernia
- Cystography (IVU/IVP) is traditional
  - Voiding in an upright position
- US
  - Other causes of groin swelling
  - Presence of hydronephrosis

Take Home Messages

Take Home Message 1

- Enquire about LUTS in patients with hernia

Take Home Message 2

- If POSITIVE LUTS:

Further imaging needed

Take Home Message 3

- If POSITIVE imaging,

?Investigate for malignancy?

Thank you

Any questions?