Epididymo-orchitis masquerading as an irreducible inguinal hernia

Introduction

Cryptorchidism is a rare finding in an adult, seen in only 0.5–1% of the population (Kassir et al, 2014). It is most often present at birth, affecting up to 5% of term newborns, and has a higher rate in premature newborns (Sijstermans et al, 2008). Orchidopexy in infants is warranted if there is no definitive evidence of testicular descent by 6 months of age (Docimo et al, 2000). Complications of untreated cryptorchidism include an increased risk of testicular germ cell tumours (Pinczowski et al, 1991) and subfertility (Kogan et al, 1987).

Discussion

The initial discovery of cryptorchidism as a result of epididymo-orchitis is extremely rare, with one prior case reported in a 78-year-old which was similarly referred to the surgical team as an irreducible inguinal hernia (Overstall et al, 2004). Several cases of epididymo-orchitis occurring in patients with known cryptorchidism have also been reported (Katz et al, 1983; Hassan and Chui, 1985; Tiwari et al, 2010). This case demonstrates the necessity of a scrotal examination for any patient presenting with a suspected inguinal hernia. In the current case the scrotal examination in combination with ultrasonography meant that acute surgical exploration was unnecessary. Furthermore, a longstanding history of unexplained infertility should have resulted in a raised index of suspicion for cryptorchidism.

Orchidectomy for cryptorchidism was performed because of the increased risk

Figure 1. Ultrasound image of the patient's scrotum. Note the absence of the right testis. A=left testis within left scrotal sac, B=right scrotal sac.

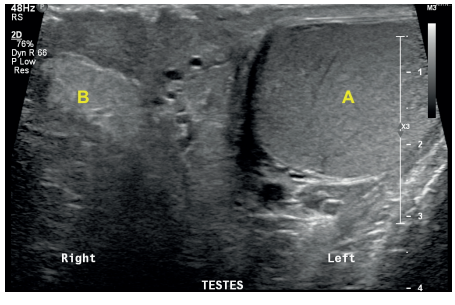


Figure 2. Right testis discovered in the right inguinal canal in this patient.

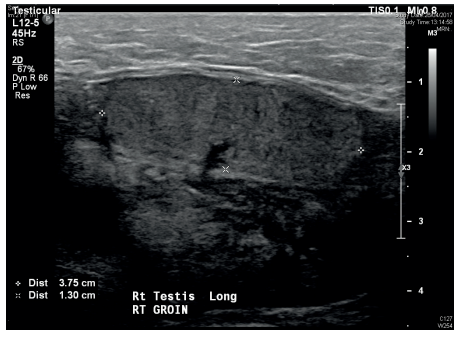
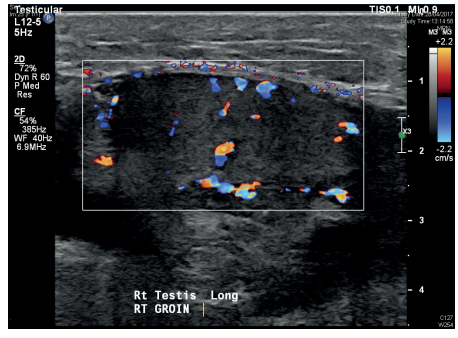


Figure 3. Colour Doppler ultrasound revealing normal vascularity of the right testis after 2 days of antibiotics in this patient.



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CASE REPORT

A 40-year-old man initially presented to his GP with a 2-day history of an irreducible groin lump with overlying erythema. There were no associated obstructive or infective symptoms. His past medical history was considered unremarkable. A provisional diagnosis of an irreducible inguinal hernia was made. He was referred to the emergency department for an urgent ultrasound and general surgical review. The ultrasound revealed a hypervascular right testis situated within the inguinal canal. The right testis was atrophic with a volume of 6 ml, compared to 16 ml for the left testis. There was no evidence of intratesticular lesions in either testis.

The patient was referred to the tertiary urological service for further assessment and management. On review the patient denied prior knowledge of his cryptorchid testis. He had a long-term complaint of infertility with no children after 10 years. Examination revealed a firm, tender and swollen mass in the right inguinal region with overlying erythema. There was no cough impulse. Scrotal examination revealed a normal left testicle and absent right testicle. He was systemically well, afebrile and haemodynamically stable. Pathology was significant for a white cell count of 11×10^9/litre and his urine was negative for *Chlamydia trachomatis* and *Neisseria gonorrhoea*. There was no growth from his urine culture. He was managed expectantly with antibiotics, initially with intravenous ampicillin and gentamicin followed by a 14-day course of trimethoprim.

At follow up 3 weeks later, an ultrasound showed resolution of the epididymo-orchitis (*Figures 1, 2* and *3*). Tumour markers were negative. Semen analysis displayed oligospermia. Three months later he underwent a right radical inguinal orchidectomy which confirmed the testis in the inguinal region between the external oblique and Scarpa's fascia. Pathological examination revealed mildly atrophic testicular tissue demonstrating seminiferous tubules with only Sertoli cells, with no evidence of spermatogenesis. No intratubular germ cell neoplasia or invasive malignancy was seen.

of testicular germ cell tumours (Ferguson and Agoulnik, 2013). Subfertility may be an issue for these patients and thus semen analysis and/or sperm banking should be performed before orchidectomy (Ferguson and Agoulnik, 2013). **BJHM**

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LEARNING POINTS

- Cryptorchid testis is a rare finding in adults, which may cause infertility.
- A scrotal examination should be conducted in patients presenting with an inguinal lump to investigate for cryptorchidism.
- Orchidopexy should be performed in patients with cryptorchid testis owing to the elevated risk of testicular germ cell tumours.
- Orchidopexy for cryptorchid testis should ideally be performed in children to reduce the risk of testicular germ cell tumours.

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Isolated distal rectus femoris rupture

The quadriceps muscle consists of the rectus femoris, vastus lateralis, intermedius and medialis. The main function of the quadriceps is knee extension. Isolated tendon rupture of a single component of the quadriceps is rarely seen or reported in the literature (Kannus and Józsa, 1991; Yepes et al, 2008).

This article presents the magnetic resonance imaging of an isolated distal rectus femoris tendon rupture in a 72-year-old fit and well avid walking-footballer who presented with a lump in the anterior aspect of the proximal thigh following a fall 4 weeks earlier. His extensor mechanism was intact. Magnetic resonance imaging with contrast (*Figure 1*) confirmed a full-thickness tear of the distal rectus femoris tendon with retraction into the upper thigh and a 14 cm gap where it had retracted from the superior pole of the patella. There was also some peripheral enhancement of surrounding haematoma.

The patient was managed expectantly as his extensor mechanism was intact and he subsequently returned to walking-football. Isolated distal rectus femoris rupture is very rare and can be managed conservatively if the extensor mechanism is intact (Ilan et al, 2003). **BJHM**

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Figure 1. Magnetic resonance imaging of the right thigh demonstrating distal rectus femoris tendon rupture. a. Sagittal image with contrast demonstrating proximal retraction of the rectus muscle to the proximal thigh. **b.** Coronal image with high signal in the muscle and peripheral haematoma enhancement. **c.** Axial image with high signal indicating the site of rupture (arrow) with intact remaining muscle components of the quadriceps.