A giant inguinoscrotal hernia: a case report and review of the literature

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Abstract

The authors report a case of giant inguinoscrotal hernia. Problems arise in management for both the patient and the surgeons because of the rarity of reported cases as there is no standard surgical procedure in place for their treatment. A literature review leads to a discussion of the various methods of surgical intervention described to overcome the dilemma of surgical repair.

Keywords

Hernia; giant inguinoscrotal hernia; pneumoperitoneum.

Case report

A 54-year-old male was admitted with a clinical picture of chest infection. On routine examination he was noted to have a very large scrotal swelling which he informed us had developed many years ago and had gradually become bigger over the last 10 years. He was seen 8 years ago when he declined any surgical intervention. The size of the swelling was now compromising his mobility but he had become so accustomed to it that he felt it was not troublesome.

The only significant factor in his past medical history was hypertension for which he was on regular medication.

Abdominal examination was unremarkable. Examination of the groin revealed an enormous bilateral scrotal swelling with no tenderness or signs of cellulitis. The scrotal skin appeared thickened and there was no obvious cough impulse present at the hernial orifices (Fig. 1).

An ultrasound scan of the scrotum reported loculated fluid and some gas levels suggestive of a large hydrocele with an associated hernia. The patient refused surgery but agreed to have a drain inserted to reduce the swelling. A standard banana catheter was inserted on the right side of his scrotum, which drained 6 l of serous fluid in the first 24 h. Subsequently, the volume of fluid drained was approximately 500 ml every 24 h. However, this did not result in significant improvement of the swelling over the course of the next few days and therefore a computed tomography (CT) scan of his scrotum was performed. This revealed loops of small bowel filling his scrotal cavity with some fluid around it, confirming the diagnosis of a giant inguinoscrotal hernia (Fig. 2).

His chest improved with medical management but he continued to refuse any form of surgical intervention for his hernia. A long course of physiotherapy was required to enable him to stand on his feet again and walk by placing his scrotum on a trolley. The drain was removed 40 days
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Fig. 1. Giant inguinoscrotal swelling.

Fig. 2. Axial sections of a CT scan of the scrotum showing small bowel loops.

after insertion, at which time it had stopped draining. However, the swelling had still not improved significantly.

Discussion

Giant inguinoscrotal hernias are uncommon. They are defined as hernias that extend below the midpoint of the inner thigh in the standing position[1]. They present a new spectrum of problems for patients apart from the classical complications of inguinoscrotal hernia. Patients encounter difficulties in walking, sitting or simply lying down, and their mobility is dramatically restricted. They also often develop gangrene and ulcers of the scrotal skin. They may present with acute retention of urine due to voiding difficulties as the scrotum tightens around the penis. They may also develop fatal tissue expansion of vascular pedicles[2].

There are few surgical techniques described in the literature for repairing giant inguinoscrotal hernias. The most common technique requires frequent insufflations of air into the abdominal cavity in order to create space to accommodate herniated viscera and facilitate fascia repair with minimal tension[3]. This technique, however, is more likely to cause expansion of the thin hernia sac, rather than the contracted abdominal cavity, and since the patient is only ready for his operation approximately 2 weeks after creating the pneumoperitoneum, some patients suffer from severe discomfort, shoulder pain, tachycardia, and dyspnoea, which may necessitate gas withdrawal. However, Schumpelick reported impressive results on 11 patients where the duration of pneumoperitoneum was shorter with no reported recurrence (follow up 1–50 months). He also described an improvement of respiratory function with the progressive pneumoperitoneum[4].

Another technique describes debulking the contents of the hernia sac by performing resection of the bowel in the hernia sac, and reconstruction of the abdominal wall using Marlex mesh and a tensor fasciae lata flap[2, 5, 6]. A similar technique was described by Merret et al., which consisted of reduction of the hernia; repair of the hernia orifices with Marlex mesh and the creation of a midline abdominal wall defect to increase the intra-abdominal capacity followed by covering this
defect with Marlex mesh with a rotation flap of inguinoscrotal skin\[7\]. Despite the increase in the intra-abdominal capacity and prevention of respiratory compromise, this operation includes two separate procedures with no attempt at reperitonalisation underneath the prosthetic mesh. In 2001, El-Dessouki described a new way to achieve this by creating a midline abdominal wall defect to increase the intra-abdominal capacity to accommodate the hernia contents. The hernia sac is then pulled up to the abdomen and fashioned as a rotation flap to augment and close the peritoneum over the replaced contents. Lastly, a giant polypropylene mesh is inserted in the preperitoneal space to cover the midline defect created and to buttress both inguinal regions\[8\].

If our patient had consented to an operative procedure, he would have been a suitable candidate for any of these techniques as his general health was otherwise good.

**Teaching point**

Giant inguinoscrotal hernias present formidable surgical problems and the morbidity and mortality associated with their repair are high. Sometimes a conservative approach, paying particular attention to the patient’s general condition and mobility, is more appropriate.

**References**