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Case Report

Giant Right Inguinoscrotal Hernia: A Case Report

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Abstract

A 69-year-old patient presented a giant right inguinal-scrotal mass for over ten years. The clinical examination and a CT-Scan confirmed the presence of a giant inguonoscrotal hernia containing the last ileal loops, caecum and the right colon. After a careful pre-operative cardio-respiratory evaluation, the surgery was proposed.

Through an inguinal-scrotal incision, the hernia sac and its contents were largely released and reintegrated into the abdomen. Reparation using a polypropylene mesh according to the Lichtenstein technique was finally performed. The postoperative course was uneventful. The patient was discharged after three days and one year later, no recurrence was found.

This case report shows that in patients with good cardio-respiratory function, Lichtenstein technique with mesh reinforcing remains the best treatment.

Keywords: Giant Inguinoscrotal Hernia; Giant Inguinal Hernia; Lichtenstein Technique

Introduction

The inguinal hernia is one of the most common surgical pathologies in the world; otherwise, the giant inguinoscotal hernias are rather rare but very physically and psychologically disabling. To define a giant hernia it is necessary that it exceeds the midpoint of the patient's internal thigh in an upright position [1] or must have an anteroposterior diameter of at least 30 cm or a latero-lateral diameter of about 50 cm with non-reducibility for more than 10 years [2]. The surgical approach is often a challenge for the surgeon and the patient. The risks of respiratory decompensation and compartment syndrome are the most fearful post-operative complications. Several techniques have been proposed including the preoperative administration of a progressive pneumoperitoneum in order to facilitate an enlargement of the abdominal cavity and a pulmonary adaptation once the herniated organs are repositioned in place but no single strategy has been proposed [3,4]. We present below a case of a patient with a giant inguinal hernia.

Case Report

This case involved a 69-year-old non-smoker Caucasian man who had as major comorbidities: arterial hypertension, non-insulin diabetes, myocardial infarction history, class I obesity (Body Mass Index: 31.2), benign prostatic hypertrophy and left inguinal hernia repair in 2002.

The patient presented a giant right inguinal-scrotal tumefaction for over 10 years that has significantly impacted his quality of life. On clinical examination, a giant non-reducible right inguinoscrotal hernia was diagnosed (Figure 1). The patient had no change in gastrointestinal transit. No contralateral hernia recurrence was

detected. Computed tomography (CT-scan) showed the presence of small-bowel and part of the colon in the hernial sac. No respiratory deficits were found in respiratory function tests and he had a good hemodynamic compensation. Surgical treatment was proposed.

Figure 1: Giant right inguinoscrotal hernia.

Surgery was performed through a classic inguinal-scrotal incision. The hernial sac was completely isolated from the spermatic cord that was preserved (Figure 2a). Upon opening the sac, the last ileal loops, the caecum and part of the right colon were freed and reintegrated into the abdomen once the peritoneal sac was closed (Figure 2b). Hernia repair was performed using the Lichtenstein technique with a polypropylene mesh and a subcutaneous drainage was placed (Figure 2c).

Figure 2: Intraoperative view. (A) Hernia sac before opening. (B) The hernia sac contained the last terminal ileum, the caecum and the right colon. (C) Final view after hernia repair.

The postoperative course was uneventful.

The urinary probe was removed the day after the surgery with a spontaneous resumption of diuresis. Drainage was removed on the third post-operative day and the patient was then discharged.

After one year, no recurrence was found (Figure 3). His quality of life increased significantly after surgery with a satisfactory cosmetic result.

Figure 3: Follow-up: three months (A) and one year after (B) after surgery.

Discussion

We presented a case of a patient with a giant inguinoscrotal hernia successfully treated through the use of a polypropylene mesh according to the Lichtenstein technique.

The literature on this subject is still very scarce and only one case series that included more than 20 patients is currently available [5].

In a recent review, Staubitz., *et al.* report a total of 70 cases [4]. This review showed that the use of preoperative pneumoperitoneum administration was performed only on 4 patients (5.7%) and that the laparoscopic approach was very rarely used (2.8%) and often unsuccessful.

In 44 (62.8%) patients, a mesh had been used which in 39% of cases was positioned in the premuscular site (Lichtenstein's procedure, n.d.r.) and in 24% in the preperitoneal location. Bowel resection was required in six patients (8.5%) while orthectectomy was performed in 20% of cases.

The post-operative course had a median duration of 8.4 days (1-28) and the most frequent post-operative complication was the development of a hematocele or seroma (21.5%). No recurrences were reported.

In our case, once we excluded a respiratory deficit, we decided to perform the hernia inguinal repair in the usual way. The pre-operative intra-abdominal administration of gas although well described [3] is actually very rarely proposed as evidenced by Staubitz., *et al*. [4]. The laparoscopic approach is similarly rare and often technically difficult especially in giant hernias, which by definition are very old and very adherent to the sac. The laparotomy approach was instead used more frequently (17.2%) [4]. In our case, we preferred to start with a classic inguinoscrotal incision, in order to be able to free the contents of the sac extensively before reintegrating it into the abdomen, preserving the laparotomy only if it was necessary or in case of bowel resection. Therefore, starting directly by laparotomy could make hernia reduction more difficult as it cannot have direct access to adhesions.

Unlike our case, usually, orchiectomy is necessary because of the tenacious connections or often, secondary to the devascularization of the testicle. No majors complications were reported in the only review disponible [4]. The appearance of seromas is on the contrary rather frequent and subcutaneous drainage is often necessary.

As regards the aesthetic result, a resection of the redundant skin could be considered simultaneously or in a second surgery. In our case, the patient was satisfied and no plastic surgery was proposed.

Conclusion

The giant inguinoscrotal hernia is a very physically and psychologically disabling pathology for the patient as well as being an important challenge for the surgeon.

After an accurate preoperative cordio-respiratory evaluation, the reparation according to the Lichtenstein technique with the use of a mesh is sufficient to restore the integrity of the abdominal wall.

Author Contributions

- FE: Conceptualization; Writing - original draft
- DS: Data curation, Writing - original draft
- MDP: Conceptualization; review and editing
- AC: review and editing

Competing Interests

No potential conflict of interest relevant to this article was reported.

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