

Testicular ischemia secondary to inguino-scrotal hernia

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Abstract: *Inguino-scrotal hernia is a very common pathology, defined as the temporary or permanent spontaneous exit of abdominal viscera through the inguinal orifice, outside the limits of the abdomino-pelvic region. Hernial strangulation is the main complication of this pathology, and constitutes a genuine diagnostic and therapeutic emergency due to the risk of intestinal or gonadal necrosis. The term "hernia strangulation" refers to the sudden, permanent and tight constriction of the organs contained in the hernia sac (intestine, omentum, bladder horn, etc.) due to a narrow, inextensible and constricted orifice. It may complicate or reveal a hernia. Cold surgical treatment of any uncomplicated hernia as a preventive measure can avoid complications that can be serious or even fatal, hence the importance of raising public awareness and providing information.*

Introduction

Inguino-scrotal hernia is a frequent pathology, with an overall incidence ranging from 0.8% to 13% in adults of all ages (1).

Hernial strangulation is the main complication of this condition, and constitutes a genuine diagnostic and therapeutic emergency. Imaging, particularly ultrasound, plays a vital role in cases of diagnostic doubt. We report a case of a strangulated inguinal hernia with gallbladder content in a 25-year-old patient clinically diagnosed in the emergency department of CHU Hassan II, FES/MAROCCO.

Patient and observation

We report the case of a young 25-year-old patient with no particular pathological history who presented to the emergency department with painful right inguino-scrotal swelling + an occlusive syndrome.

Examination revealed a conscious patient, WHO 0, normocardial, normotensive, afebrile. Physical examination: irreducible painful right inguino-scrotal swelling without inflammatory signs, with a right testicle in an intra-scrotal position. The diagnosis of a strangulated inguino-scrotal hernia with gallbladder content complicated by homolateral testicular distress was accepted.

The diagnosis was confirmed by surgery, using a double scrotal approach and a right keletomy, with reintegration of the gallbladder contents into the abdominal cavity, combined with cure of the inguinal hernia according to bassini and orchidopexy.

Postoperative recovery was straightforward, and the patient was discharged on day 3.



Intraoperative images: Testicular ischemia secondary to inguino-scrotal hernia

Discussion

Acute scrotal pain is a very common presentation in emergency departments. Differences for acute scrotal pain include testicular torsion, epididymitis-orchitis, Fournier's gangrene and scrotal trauma. Inguinal hernia is also a very common pathology, and inguinal hernia repair is one of the most common surgical procedures.

Inguino-scrotal hernia is a frequent pathology in adults, unlike in children, which is congenital (absence of regression of the peritoneo-vaginal canal (PVC) is more often acquired (indirect and external oblique hernia).

Hernial strangulation is the main complication, and constitutes a genuine diagnostic and therapeutic emergency.

The diagnosis of hernial strangulation is essentially clinical, but imaging

Medical imaging can help. In addition, biological and radiological examinations (haemostasis test, blood grouping, CBC, blood ionogram, chest X-ray, ECG)

will enable us to carry out a preoperative assessment and evaluate the hydrolytic and electrolyte repercussions of the occlusion.

electrolytic impact of occlusion. The APS film can visualize a digestive structure at the hernia site, or the NHAs that are common to small bowel obstructions, which are wider than they are high, or colonic obstructions, which are higher than they are wide. It should be performed systematically in the event of any abdominal emergency. Ultrasound and CT scans are only useful when there is diagnostic doubt about a haematoma, abscess, adenopathy, lipoma or tumour of the abdominal wall.

Hernial strangulation is the major complication of HIE. It leads to OIA through

Strangulation, with the risk of a toxic-infectious accident and fatal progression to gangrene, and here

Intestinal perforation, with generalized peritonitis or pyostercal phlegmon. Consequently,

Surgery must be performed as a matter of urgency.

However, surgery cannot be performed without a minimum of pre-operative examinations and without

Preparation of the patient. A quick but careful examination will provide information on possible previous faults, the time of the last meal, and the patient's cardiac and pulmonary condition, thus making it possible to assess the risks of anesthesia and post-

operative pulmonary and cardiovascular complications. Blood grouping, bleeding time and coagulation time will be determined, and a CBC with hematocrit will be performed.

Treatment of HIE is urgent and exclusively surgical, to avoid fatal progression to gangrene and intestinal perforation.

The elective inguinal approach is the unanimous choice of all authors

(1, 2, 3, 4, 5). The incision is made along the long axis of the hernia protrusion, moving upwards over the skin, subcutaneous tissue and aponeurosis of the oblique longus more than in a radical cure.

The bag, distended by its contents, presents itself. It should be incised very carefully

Carefully on a transverse fold raised by two forceps, as the strangulated loop is often

Distended and in direct contact with the serous sheath of the sac, which usually leaks a

Citrine or serosanguineous fluid. It is preferable to open the bag before opening the neck, to avoid reintegration of the contents before checking.

A precise assessment of visceral lesions is imperative. Attitude to herniated viscera

is currently well codified. The herniated organ should only be reintegrated if there is no longer any doubt as to its condition. Otherwise, it must be resected.

Herniorrhaphy : The most commonly used techniques are those of Bassini (used in our patient), MacVay and Shouldice. They all meet the following objectives:

reintegrate the herniated viscera into the peritoneal cavity, after resecting the herniated segments.

possibly ischemic segments.

Reconstruct the abdominal wall to prevent recurrence.

Preserve the ductal function of the inguinal region in men, respecting the pedicle

Vasculo-nervous pedicle of the testicle

Once the indication for surgery has been established, clinical exploration and the advent of

anaesthesia, and the surgeon's experience, the operative mortality rate is low or non-existent. In the past, mortality depended on the patient's age, general condition, the acute abdominal condition associated with the hernial strangulation, the viability of the hernial contents and, above all, the preoperative interval (6,7).

Haematoma is a frequent complication after hernia surgery, its

rate varies from 2 to 6.9% in the literature (8,9). It occurs mainly after dissection of a

voluminous hernia, especially in the scrotum, even after meticulous haemostasis.

Infectious complications after hernia surgery are rare. Emergency surgery

with or without an associated septic procedure, represents a risk factor for

infectious complications. Obesity, immunosuppression, age over 70, and cardiovascular and respiratory disorders are also risk factors. It can also complicate a hematoma or seroma. Its frequency varies from 0.7% to 6% of surgical patients, depending on the circumstances.

Postoperative urinary retention, characterized by the absence of urine output for more than

than 6 hours, and the presence of a bladder globe, appears to be the most frequent after spinal analgesia

spinal analgesia, after the use of drugs with an atropine effect, or when analgesia

postoperative analgesia. Treatment of acute urinary retention involves the prescription of drugs such as dihydroergokryptine (Vasobral: 2 to 4 mg per os) and may involve urethral catheterization left in place for at least 24 hours, combined with antibiotic prophylaxis (10).

Testicular atrophy can occur at any age after inguinal hernia repair with orchidopexy, and is the most frequent reason for claims and compensation requests in medical insurance company reports.

One in two postoperative ischemic orchitis cases leads to testicular atrophy. The procedure in question has always involved an anterior inguinal approach, whereas no testicular atrophy has been reported after abdominal cure. The literature reports an incidence of 0.5-0.9% after primary cure, rising to 3-5% for recurrent hernias (11). Preventing testicular atrophy involves

Avoiding dissection of the cord below pubic level, abandoning the distal part of the indirect sacs in the scrotum (already recommended by Fruchaud) and using the posterior abdominal approach in any surgeon who has already undergone scrotal surgery (12).

If the atrophic testicle after orchidopexy is painful, or shows changes that are suggestive of degeneration, orchiectomy should be performed, followed by the fitting of a testicular prosthesis.

testicular prosthesis.

Our patient had none of the complications described in the literature.

Conclusion

Imaging, particularly ultrasound, plays a vital role in cases of diagnostic doubt, especially when the inguino-scrotal hernia occurs in the context of an oscillating testicle, as the picture may mimic a torsion of the spermatic cord. Ultrasound should be performed in the event of a strangulated inguino-scrotal hernia with caecal content, particularly in the context of an oscillating testicle, to rule out associated testicular ischemia.

Conflicts of interest

The authors declare no conflicts of interest.

Authors' contributions

All authors have contributed to the conduct of this work. All authors also declare that they have read and approved the final version of the manuscript.

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