

The saxophonist's hernia: a rare case report of anterior primary perineal hernia in a young male patient

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Abstract

Perineal hernia is the protrusion of an intra-abdominal structure into the perineal area, that could be primitive or secondary to trauma or abdominoperineal resection. Main treatment could be transabdominal, transperineal or combined. Here is a rare case of anterior perineal hernia in a young saxophone male patient, treated with a minimally invasive perineal approach.

A 25-year-old Caucasian male patient referred 1-year history of perineal pain. The pain was more severe when he played his saxophone. Local exam was negative but a dynamic perineal ultrasonography revealed a small anterior perineal hernia. The defect was repaired with a polypropylene plug and the patient was discharged the day after. At one year, no signs of remission have been signalled.

Perineal mesh hernioplasty of primary perineal hernia is technically feasible, is associated with rapid recovery and minimal complications, and has a good long-term outcome. The use of ultrasonography to detect the hernia could be considered the best choice whenever it is of small size. Ultrasonography allow to identify weakness areas, reducing diagnostic time and avoiding further costs. *Clin Ter 2017; 168(2):e133-135. doi: 10.7417/CT.2017.1994*

Key words: abdominoperineal resection, case report, hernioplasty, pelvic floor, perineal hernia

Introduction

A perineal hernia is defined as the abnormal protrusion of an intra-abdominal structure through the pelvic floor into the perineal area. Weakness of the endopelvic fascia and musculature lead to herniation of the intraabdominal and pelvic organs, such as small bowel, colon, and bladder. It is five times more common in women presumably because of a broad pelvis and weakening of the pelvic floor as a result of pregnancy and childbirth (1). The majority of cases are secondary to traumatic injury to the perineum or secondary to major pelvic operations, such as abdominoperineal resection (APR) and pelvic exenteration (2-8). An incidence up to 7% has been reported following APR(3). The incidence is thought to be higher following laparoscopic APR due to

reduced adhesion formation. The resultant pelvic floor defect following surgery may permit small bowel to enter the pelvis below the pelvic floor. Clinical diagnosis is difficult and imaging modalities, such as ultrasound and computed tomography (CT) of the pelvis, will clinch the diagnosis. CT will demonstrate the herniation of the bowel loops through the levator ani and coccygeus muscles (1). Surgical repair has been previously described via transabdominal, transperineal, and combined approaches (3-5,7-13). Laparoscopic repair with mesh has been described for postoperative perineal hernia following APR (6,14). This case report of a patient with a substantial primary perineal hernia details the clinical aspects, emphasizing the advantage of a minimally invasive approach. Reduction of the hernia, dissection of the peritoneal sac, careful muscle repair and adequate positioning of the polypropylene mesh are important keys to surgical success.

Case report

A 25-year-old Caucasian male patient came to our attention complaining of 1-year history of an intermittent, sudden and acute pain in his perineum. The patient referred also a slight persistent local discomfort but no abdominal pain, urinary or defecatory symptoms.

The patient was a professional saxophone player and he felt worse when he played his instrument. The young man suffered from panic attacks, coeliac disease, and he underwent right tonsillectomy for a small tonsil wart when he was five. General exam was negative. Local exam did not evidences any visible swelling but the patient complained of an intense pain in his posterior and left paramedian perineal region, just below his scrotal sac and on his left pubic branch, on superficial and deep palpation. Patient's blood exams were normal and regional ultrasonography, with high frequency linear probe, showed the presence of small amount of hyperechoic soft tissue, probably peritoneal omental fat, within the ischioanal fossa adjacent to the anal canal. This tissue pushed out through a weakness in the muscular diaphragm of the pelvis (pelvic floor) at the level of the

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levator ani muscle. This appearance is more evident during dynamic manoeuvres that increase intraabdominal pressure, such as Valsalva manoeuvre, that can help to detect subtle hernias. The patient was submitted to surgery 24 hours after diagnosis. Hernioplasty was performed under local anaesthesia, using mepivacaine 5%. With the patient in lithotomy position, a small incision (about 3 cm) was performed on the projection of the left pubic branch. A small peritoneal sac was recognized in the urogenital diaphragm (Fig. 1). The sac was gently reduced and a polypropylene plug was inserted into the defect and secured to the pelvic sidewall in a tension-free fashion, with non-absorbable 2-0 stiches.

The patient made an uneventful recovery and was discharged home on the first post-operative day. At one year after surgery the patient was healthy and did not show any sign of remission.

Discussion

Perineal hernia may be classified anatomically into anterior or posterior types, depending on the relationship to transverse perineal muscle. Posterior variety can occur through a defect between levator ani muscles (hiatus of Schwalbe) or levator ani and coccygeus muscle (15). Anterior hernia occurs through the urogenital diaphragm and usually occurs in women. Perineal hernias may be mistaken for other diseases of the perineum and adjacent organs, such as lipomas, fibromas, rectocele, cystocele and prolapse of



Fig. 1. Perineal dissection to isolate and recognize hernia sac.

the rectum. One particular condition from which perineal hernias must be distinguished is sciatic hernia, the rarest of all hernias, which emerges through the greater or lesser sacroscliac foramen and, like a posterior perineal hernia, presents as a mass along the inferior margin of the gluteus maximus muscle (16). Diagnosis of perineal hernia is already very difficult and the presence of an anterior type in a young male patient, complicated further the management of the disease. CT-scan and pelvic magnetic resonance imaging (MRI) should be the gold standard to recognize herniation and receive information about the content of the visceral sac (17-19). In the normal pelvis, CT scans are adequate to display the muscle anatomy of the pelvic floor, thereby allowing the identification of any muscle perineal defect (17). Whenever perineal hernia is of small size, the above cited imaging technique could be safely substituted by an easier, faster and cheaper perineal ultrasonography. In the discussed case, as described for other cases (20), CT scan and MRI of the pelvis could have not added more information than was provided yet (21). Ultrasounds allowed to recognize the small hernia through the urogenital diaphragm and allowed a direct observation of visceral sac protrusion, during Valsalva manoeuvre.

The therapy of perineal hernia is very controversial. Methods for both approach and technique of closure vary in the existing literature. This might be caused by the complex anatomy of the pelvic floor. Identification and especially mobilization of muscular and fascial components can be very difficult. Therefore, an individual strategy must be developed. Cali et al. proclaim the transabdominal approach in most cases (22). These results are supported by Beck et al. (4). However, Martin et al. and So et al. prefer the perineal approach and describe it as an adequate therapy (5,23). Others recommend a combined abdomino-perineal approach (10,24). Although simple closure of the pelvic defect by bringing together the levator ani muscles along the midline is occasionally feasible, the pelvic floor is usually deficient and requires support using autogenous or prosthetic materials (10,24). Even musculus flaps from the rectus abdominis, the gluteus or the gracilis muscle have been described for treatment of perineal hernia (25,26).

Remzi et al. used the bladder itself for closure of the pelvic defect (7). According to Sorelli et al., for an uncomplicated primary perineal hernia, laparoscopic repair is technically easy and is associated with rapid recovery and minimal complications. Laparoscopy could be probably the most useful means of identifying a hernial defect and has the advantage of allowing immediate treatment (21). Despite its long history, there remains a paucity of reported cases. The pooled analysis by Mjoli et al. identified only 45 cases between 1944 and 2010, with 22 perineal repairs, 11 open abdominal operations, 3 combined abdominoperineal approach, 5 laparoscopic repairs, and 2 laparoscopic-perineal procedures, but they highlighted also a further 31 cases in a small case series (27). The recent report from Martijnse et al. (28) adds a further 29 cases, for a total of just over 100 cases in nearly 70 years. The role of biologic mesh for primary reconstruction of the pelvic floor after extra levator APR has been the subject of a systematic review, and this was considered a promising technique for improving wound healing and complication rates comparable to other techni-

ques (29). Biologic meshes have been used recently as an alternative for repairing perineal hernia following an extra levator APR. The biologic mesh acts not only as a structural support for the hernia repair but also as a scaffold allowing the ingrowth of native fibroblasts, which in turn lay down the fibrous tissue and promote tissue remodeling (30). A recently published case series of 15 patients undergoing PerH repair with porcine acellular dermal mesh reported recurrence rates of 47% after a median follow-up of 17 months (IQR 12–24) (31). However, the low volume, quality of available data, and lack of any comparative studies make it difficult to evaluate the use of biologic meshes as a technique. In our opinion, the perineal approach for small size perineal hernias could be the better way to avoid patient discomfort and to guarantee a very rapid recovery. The use of local anaesthesia allowed to recognize hernia during intervention and to arrange polypropylene plug into the right position. Operative time was short (about 30 minutes) and the patient was discharged one day after surgery. The technique is safe and effective with a good long-term outcome.

Conclusion

Perineal mesh hernioplasty of primary perineal hernia is technically feasible, is associated with rapid recovery and minimal complications, and has a good long-term outcome. The use of a synthetic mesh to repair the defect likely improve results. Importantly, hernia size should be monitored and the surgical intervention should be performed as early as possible to avoid more invasive approaches and unpleasant complications. The use of ultrasonography to detect the hernia could be considered the best choice whenever it is of small size. Ultrasonography allow to identify weakness areas, reducing diagnostic time and avoiding further costs.

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