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Perineal Hernia another Complication That Influences the Quality of Life after Amputation of the Rectum: Case Report

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Abstract **Case Report**

Introduction: Perineal eventration or perineal hernia is a protrusion of the pelvic floor containing intra-abdominal viscera. The occurrence of postoperative perineal hernia after abdominoperineal resection (APR) is rare, but has increased recently affecting the quality of life of the patient. ***Presentation of case:*** Here, we report a 68 -year-old women with history of myomectomy was diagnosed with a low rectal cancer. She has abdominoperineale resection after radiotherapy. She was operated for white line hernia 2 years after with mesh fixation. She presented to us 5 months after the operation, with perineal bulge and discomfort. The diagnosis of a perineal hernia was made clinically and was complemented by a CT scan. Abdominal CT scan showed that part of the small intestine was slightly protruding from a large defect of the pelvis. ***Discussion:*** Recurrence rates of perineal eventration has increased recently. Many approaches have been described, but there is still no consensus as to the optimal repair technique for perineal eventration. ***Conclusion:*** This case report confirm that perineal eventration is frequent in women such as literature with other risk factors like APR radiotherapy and a history of pelvic surgery.

Keywords: Perineal eventration, rectal cancer, abdominoperineal resection, treatment.

INTRODUCTION

Perineal hernia is a protrusion of the intraabdominal viscera through a defect in the pelvic floor, it may be classified as primary (congenital or acquired) or secondary (postoperative) [1].

Postoperative perineal hernia is a rare complication following abdominoperineal excision of the rectum[2]. It was first described in 1939 but few studies have focused on perineal hernia after AAP [3].

It occurs after about 1% of abdominal amputations, more frequently in women. Predisposing factors are a wide pelvis, wide excision, hysterectomy, abdominal hyperpressure, and postoperative infection [4].

The treatment of perineal hernia is surgical it uses transabdominal, perineal, or abdominoperinal combined approaches [5].

Mesh repair through an anterior abdominal approach is one of the surgical options of the surgical treatment [2]. The laparoscopic approach has recently been used and its use is expected to increase [6].

The aim of this case report is to confirm wich described in literature that perineal eventration occurs in women after APR, radiotherapy and history of pelvic surgery.

OBSERVATION

A 68 -year-old female patient with a history of myomectomy 15 years before was diagnosed with a low rectal cancer.

She underwent abdominoperineale resection (APR) with preoperative radiotherapy. She was operated for white line hernia 2 years after with mesh fixation. 5 months after she presented to us, with perineal bulge and discomfort on standing and sitting position.

Physical examination showed perineal bulge approximately 10 cm in diameter reduced

spontaneously with skin erosion. Laboratory tests were normal.

The diagnosis of a perineal hernia was made clinically and was complemented by a CT scan of pelvis. The scan did not show any evidence of local or distant disease. Abdominal CT scan showed that part of the small intestine was slightly protruding from a large defect of the pelvis. The scan did not show any evidence of local or distant disease.

Table 1: Advantages and disadvantages of differentes approaches (by Stamatiou) [5]

Approaches	Advantages	Disadvantages
Trans-abdominal	Optimal exposure for dissection and reduction of hernia sac Possible for simultaneous trans-abdominal procedure Better mesh fixation;	Need for more pelvic dissection; More morbidity
Perineal	Less morbidity Simplest; Feasible for minimally-invasive approaches	Suboptimal exposure for dissection and reduction of hernia sac; Difficult mesh fixation
Combined abdomino-perineal	Best for complex cases; Best exposure	Increased magnitude of operations; More morbidity

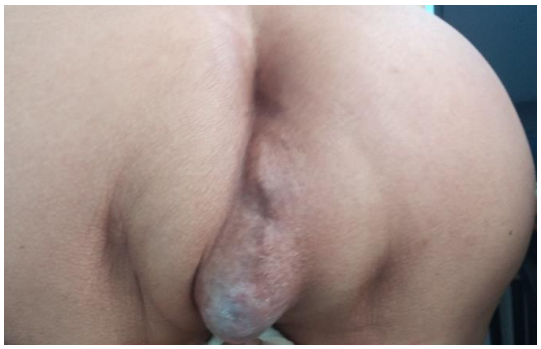

Figure 1: Perineal hernia with erosion skin

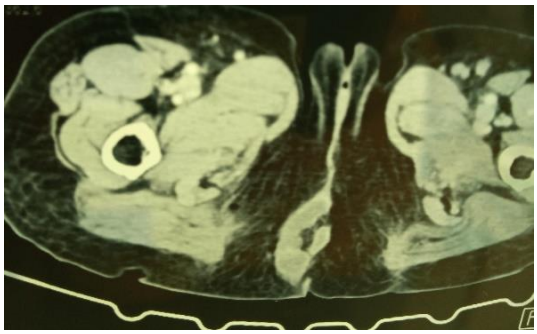

Figure 2: CT scan of the pelvis showed perineal hernia

Figure 3: CT scan sagittal view: perineal hernia

Figure 4: CT scan of pelvis objective the protrusion of the small bowel through the pelvis defect

DISCUSSION

Perineal hernia is the protrusion into the perineum of intraperitoneal or extraperitoneal contents through a congenital or acquired defect of the pelvic diaphragm [1, 5].

It may contain small bowel, large bowel, bladder, uterus and omentum [7]. It can be congenital due to the failure of regression of the peritoneal cul de sac of the embryo, or acquired [5].

Acquired hernia are primary or secondary. Primarily acquired perineal hernias are caused by factors associated with increased intra-abdominal pressure. It occurs more commonly in females as a result of the broader female pelvis and the attenuation

of the pelvic floor during pregnancy and childbirth. Secondarily acquired perineal hernias are incisional hernias associated with extensive pelvic operations like abdominoperineal resection (APR) of the anorectum pelvic exenteration (PE) and perineal prostatectomy [1, 5, 6, 8].

Postoperative perineal hernias were first described in 1939 by Yeomen after a proctectomy for rectal cancer [6, 8, 9].

The incidence of PE due to APR is estimated at less than 1% and from 3% to 10% after pelvic exenteration [6].

The average age for the occurrence of PE is estimated at 70 years and occurs most frequently in the first year after proctectomy [10].

Risk factors for secondary PE include a large pelvis in women, radiotherapy, previous hysterectomy an excessively long small bowel mesentery, and perineal infection [1, 2, 5, 8].

The reported patient had multiple predisposing factors for perineal hernia including female gender history of myomectomy, abdominal perineal resection and radiotherapy

All of these factors have contributed to a disturption of his pelvic anatomy and consequently the development of perineal hernia.

Some studies reported that laparoscopic surgery is also a risk for PE because the peritoneum of the pelvic floor is not sutured in and the small intestine may prolapse in the pelvic floor [8].

They can be asymptomatic and incidentally diagnosed in postoperative check-up [3] , but sometimes patients can manifest a unilateral bulge in the area of the perineal region, with perineal discomfort on standing or sitting, pain and sometimes bowel obstruction and urinary symptoms or skin erosion [3, 6, 7, 11].

Careful physical examination usually reveals a perineal swelling with a positive cough impulse. The diagnosis can be supported by sonography or CT scan of the pelvis as illustrated in this patient magnetic resonance imaging can easily detect stretching of soft tissues [3, 6, 11].

Surgical treatment is indicated for symptomatic hernia to prevent complications like small bowel obstruction and strangulation[10]. It depends of the general conditions of the patient; the oncological evolution; the size of the muscle defect and the local septic condition[12].

Various techniques have been described but none have been accepted as the “Gold Standard [3, 8, 10, 13].

According to a recent systematic review, a perineal hernia repair was performed using the perineal approach in 69%, laparoscopic approach in 23%, and open abdominal approach, laparoscopic perineal approach, and open abdominoperineal approach in a few percent. The perineal and laparoscopic approaches have been performed most commonly in recent years [14]. The robotic surgical da Vinci Si System was used with success [7, 13].

The defect in the pelvic diaphragm can be obliterated ,with suturing of remaining muscle tissue or by using autogenous tissues or mesh depending on the surgeon’s expertise and local conditions [8, 10, 12].

The advantages and disadvantages of different approaches are summarized in Table 1. Somes studies suggested perineal approach is associated with higher recurrence rate [8, 10].

Probably due to a poor fixation of mesh in perineal approaches [8, 10]. For our patient because of the adhesions due to the old operation the dissection will be difficult with transabdominal approach and a perineal approach will be more appropriate in this situation.

The principles of repair are the same in different approaches, we must open the hernia sac; reduce the hernia contents, followed by the fixing of the mesh to the pelvic walls after fixing the mesh, the surface fascia is closed and the remaining cavity below it must be drained [2, 12]. Some Surgeon advocate for the prophylactic closure of perineal wound with a muscle flap like vertical rectus abdominis muscle to prevent postoperative perineal hernia. Other muscular or musculocutaneous flaps can be used, like large gluteal muscle flap,*gracilis* flap, or *fascia lata* [2, 12].

Tissue flap reconstruction is more commonly used for recurrent hernias or hernias with a history of irradiation or infection [10].

Other techniques can be used like closing the defect with the restoration of the musculoaponeurotic plane, or negative pressure wound therapy (NPWT) where reconstruction is not possible and for small defect [12].

CONCLUSION

Postoperative perineal hernias is a real challenge for surgeons. The developments in the surgical techniques for rectal cancers, continue to be unable to prevent perineal hernia due to, neoadjuvant and adjuvant treatment.

This case report and following the literature confirm that women patient with other factors are more commonly exposed to develop perineal hernia.

Conflict of interests: The authors have nothing to disclose.

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