

Recurrent Perineal Hernia - Case Report and Review of the Literature

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Rezumat

Hernia perineală recurentă - raportare de caz și analiză a literaturii

Hernia perineală reprezintă protuzionarea viscerelor intra-abdominale prin planșeul pelvin. Prezentăm cazul unui pacient cu hernie perineală recurentă – formațiune de 12x9 cm palpabilă, moale, greu ajustabilă în canalul pelvin cu tegumentul supraiacent aderent la aceasta. Pacientul a fost operat via abord abdominoperineal. Am efectuat plastie a planșeului pelvin în dublu strat cu plasă din titan și cu ajutorul omentului și a mușchilor pelvini.

Cuvinte cheie: hernie perineală, planșeu pelvin, hernie

Abstract

Perineal hernia is the protrusion of intra-abdominal viscera through the pelvic floor. We present a patient with recurrent perineal hernia - 12x9 cm with a palpable soft, hardly adjustable in the pelvic tunnel formation and attenuated skin over it. The patient was operated by abdominoperineal approach. We performed two layer Titanium mesh plasty of the pelvic floor with the use of the omentum and the pelvic muscles.

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Key words: perineal hernia, pelvic floor, hernia

Introduction

Perineal hernia is the protrusion of intra-abdominal viscera through the pelvic floor. They are classified as primary and secondary (postoperative). Secondary perineal hernias are postincisional ones occurring after pelvic surgery (abdomino-perineal resection, pelvic exenteration and perineal prostatectomy). Their prevalence after abdominoperineal resections is 0.34%. (1) Clinical presentation includes perineal bulge, pain, discomfort and often bowel obstruction.

Different surgical approaches have been described for repair of perineal hernias – abdominal, perineal, abdominoperineal and laparoscopic, but until now there is no large study, suggesting a unified treatment strategy. (2-5)

We present the case of a patient with recurrent perineal hernia and the method of double-layer repair of the pelvic floor with 2 meshes.

Case report

We present the case of a 68 year-old patient who underwent abdomino-perineal resection for lower rectal cancer (16.08.2011) with preoperative radiotherapy 5x5 Gy, postoperative radiotherapy and 6 courses chemotherapy (FOLFOX). The patient was re-admitted (12.03.2012) because of the presence of a bulge and sense of discomfort in the perineal area without bowel obstruction. A well-defined hernial defect (4x6 cm) had been established. The performed CT, abdominal ultrasound, colonoscopy and levels of tumor markers CEA and CA 19-9 did not show any evidence of tumor recurrence. (Fig. 1)



Figure 1.

A surgical reconstruction with perineal approach was performed (13.03.2013). The hernial sac was dissected and a small intestine loop was identified in it. It was mobilized and pelvic floor plasty was performed with primary suturing of the hernial defect and subsequent mesh fixation. Two months later the patient noticed a perineal bulge whose size increased quickly. On 04.02.2013 the patient was admitted to the Clinic of Surgery, University Hospital "St. Joanna" – Sofia with evidence of recurrent perineal hernia and complains of bulge, pain and discomfort in the perineal area and intermittent bowel obstruction. The physical examination revealed a large perineal defect 12x9 cm with a palpable soft, hardly adjustable in the pelvic tunnel formation and attenuated skin over it. Bowel peristalsis was auscultated over the defect. PET-CT was performed – no evidence of malignant recurrence. CT showed a hernial sac with fixed bowel loops from the presacral area to the perineal skin. The patient was operated by abdominoperineal approach because of the hernial recurrence and previously performed radiotherapy. Intraoperatively many adhesions were detected between the intestinal loops, abdominal wall and omentum. Total weakness of the pelvic floor was revealed with accreted small bowel loops fixed to the pelvic tunnel with thickened wall and pre-stenotic dilatation of the afferent intestinal segment. Total debridement was performed. The left flexure was mobilized and the prepared large flap of the omentum was situated deeply in the pelvic floor to wad the hernial defect and suture to the peritoneum. A Titanium mesh 20/30 cm was fixed with Prolene 2/0 to the parietal peritoneum, sacrum, pubic bone and re-positioned omentum so a new pelvic floor was created this way. The hernial sac was resected via perineal approach. A Titanium mesh 15/15 cm was placed in the perineal area and fixed to the surrounding tissues. The pelvic muscles were dissected and sutured to the mesh. (Fig. 2, 3)

Abdominal and perineal Redivac drains were inserted and removed 24 hours later. The abdominal wall was

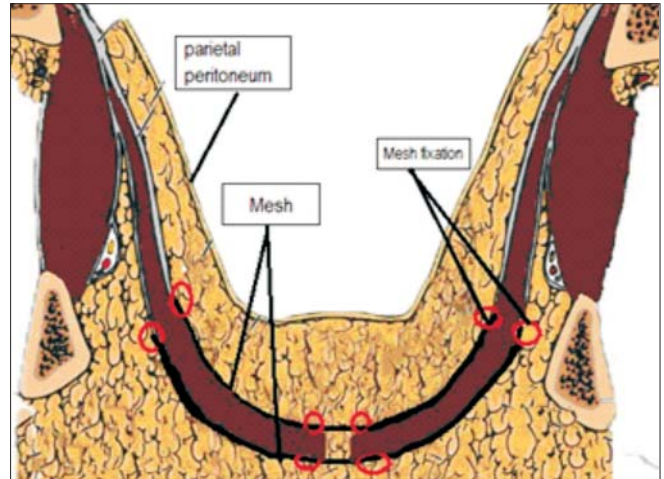


Figure 2.

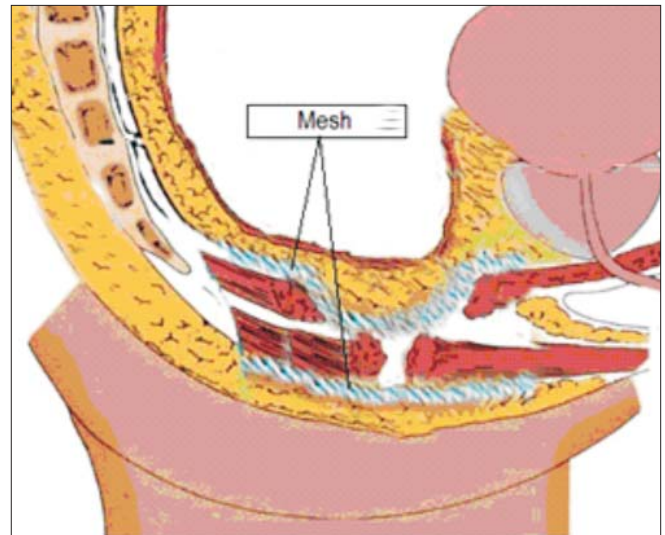


Figure 3.

repaired layer by layer. The patient made an uneventful recovery – flatulence was restored on the third postoperative day and defecation – on the fifth day after the operation. The patient was discharged on 18.02.2013. The abdominal wound healed primarily. A drain was inserted for 5 days in the perineal wound because of the secretion prolonged until the 40-th postoperative day. There was no evidence of recurrence of the perineal hernia and main disease at follow-up up until now (Fig. 4). The patient has a normal lifestyle and extant physical activity.

Discussion

Perineal hernias were described for the first time in 1743 by Garangeot. (6) They are infrequent complications after pelvic operations. Their prevalence is less than 1% after abdominoperineal resection and 3-7% after pelvic exenteration. (7) In addition to primary and secondary, perineal hernias can be divided into anterior or posterior, depending on their position

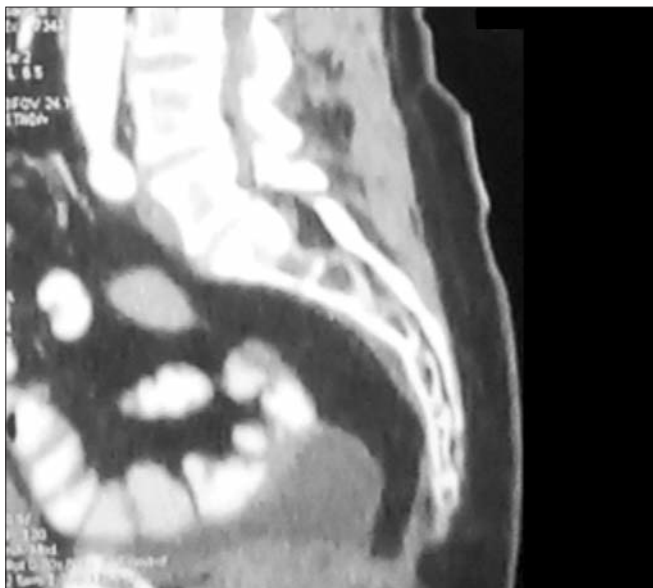


Figure 4.

to the superficial transversal perineal muscle. Commonly they are asymptomatic, so many authors maintain that their prevalence is significantly higher but the condition remains undiagnosed or without necessity of surgical treatment. (8,9) The most common symptoms are perineal bulge, pain and sometimes bowel obstructions and urinary symptoms. (10) In cases with large hernias erosions or even ulcerations of the skin can occur. Clinical examination usually reveals a perineal swelling with a positive cough impulse. Time to onset of the perineal hernia after pelvic surgery usually is between 6 months and 5 years, most often in the first year. (5,10) Predisposing factors include female gender, large pelvic resection, especially abdominoperineal resections, previous hysterectomy, radiotherapy and wound infections. (7,11) The most suitable diagnostic methods are CT and contrast enema. Recurrence of the malignancy must be excluded.

Given the low prevalence of such hernias there is, however, no consensus as to which approach is best. The laparoscopic approach has been recently used but not routinely in the repair of these hernias. The main approaches are 3 - abdominal, perineal and combined abdominoperineal.

The primary suturing of the perineal defect is usually not feasible, because the edges of the defect cannot be approximated in many cases. The defect has to be strengthened with synthetic meshes or own tissues like peritoneal grafts, dura and fascia lata grafts, omental carpet, uterus and even the bladder. Myocutaneous flaps are increasingly being used, for example Gracilis myocutaneous flap. The use of biological tissue is a better surgical technique in cases with ischemic region, for example after radiotherapy or in the presence of contamination with the possibility of infection of the surgical site. (7)

The perineal approach is the simplest, but the ability of dissecting out the hernial sac and visceral tissues is worse which increases the risk of bowel injury. According to Aboian et al. (2006) the abdominal approach is more secure than the

isolated transperineal option because of the better exposure for dissecting of the hernial sac and its contents. In addition, it also provides better dissecting of the pelvic structures and mesh fixation. (1) Furthermore, in cases with malignant recurrence simultaneous removal of the tumor and hernia repair can be performed. In cases with large hernias the combination between both methods is suitable. The choice of synthetic mesh is very important. For example, the composite mesh which has a hydrophilic film reduces the risk of visceral adhesions while the nonresorbable polyester mesh provides long-term reinforcement of soft tissues. (12)

The recurrence rate after hernia repair is lower using meshes compared to primary suturing own tissues. So JB et al. (1997) reported 16% recurrence rate after operations for perineal hernias. (13)

Conclusion

The choice of method and approach of repair should be individualized, depending on the size of the hernia, primary operation, condition of the patient, previous radiotherapy, symptoms, etc.

References

1. E. Aboian, D. C. Winter, D. R. Metcalf, and B. G. Wolff, "Perineal hernia after proctectomy: prevalence, risks, and management," *Diseases of the Colon and Rectum*, vol. 49, no. 10, pp. 1564-1568, 2006.
2. T. Akatsu, S. Murai, S. Kamiya et al., "Perineal hernia as a rare complication after laparoscopic abdominoperineal resection: report of a case," *Surgery Today*, vol. 39, no. 4, pp. 340-343, 2009.
3. M. G. Sarr, J. R. Stewart, and J. C. Cameron, "Combined abdominoperineal approach to repair of postoperative perineal hernia," *Diseases of the Colon and Rectum*, vol. 25, no. 6, pp. 597-599, 1982.
4. R. J. E. Skipworth, G. H. M. Smith, and D. N. Anderson, "Secondary perineal hernia following open abdominoperineal excision of the rectum: report of a case and review of the literature," *Hernia*, vol. 11, no. 6, pp. 541-545, 2007.
5. J. B.-Y. So, M. T. Palmer, and P. C. Shellito, "Postoperative perineal hernia," *Diseases of the Colon and Rectum*, vol. 40, no. 8, pp. 954-957, 1997.
6. D. Stamatiou, J. E. Skandalakis, L. J. Skandalakis, and P. Mirilas. Perineal hernia: surgical anatomy, embryology, and technique of repair. *Am Surgeon* 2010;76(5):474-479
7. B. Basem Morcos, M. Al-Masri, B. Baker, Perineal hernia, another incisional hernia?, *Indian J Surg* (May-June 2009) 71:112-116
8. R. Cattel, R. Cunningham (1944) Postoperative perineal hernia following resection of the rectum: report of a case. *Surg Clin North Am* 24:679-683
9. HE Hullsiek (1956) Perineal Hernia after abdominoperineal resection. *Am J Surg* 92:735-738
10. E. Brotschi, JM Noe, W. Silen (1985) Perineal Hernias after Proctectomy, A new approach to repair. *Am J Surg* 149(2): 301-305
11. S. Ryan, D.O. Kavanagh, and P. C. Neary., Laparoscopic Repair of Postoperative Perineal Hernia., Volume 2010, Article ID 126483, 3 pages doi:10.1155/2010/126483
12. J. P. Arnaud, S. Hennekinne-Mucci, P. Pessaux, J. J. Tuech, and C. Aube, "Ultrasound detection of visceral adhesion after intraperitoneal ventral hernia treatment: a comparative study of protected versus unprotected meshes," *Hernia*, vol. 7, no. 2, pp. 85-88, 2003.
13. So JB, Palmer MT, Shellito PC (1997) Postoperative perineal hernia. *Dis Colon Rectum* 40:954-95