Case Report / *Olgu Sunumu*

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Transvaginal Resection of Exposed Mesh After Laparoscopic Sacrocolpopexy: A Case Report

Laparoskopik Sakrokolpopeksi Sonrası Meş Erozyonunun Vajinal Olarak Çıkarılması: Olgu Sunumu

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Abstract

Synthetic mesh has been traditionally used abdominally to correct apical prolapse of the vaginal vault. Laparoscopic sacrocolpopexy has been shown to demonstrate comparable outcomes to the open abdominal approach. Mesh erosion/extrusion is a well-recognized complication of mesh sacrocolpopexy and erosion rates with sacrocolpopexy range from 2% to 10% in the literature. No prospective randomized trials have been performed on the the treatment of mesh erosion. We present a case of full-thickness vaginal mesh erosion occurred 3 months after laparoscopic sacrocolpopexy and therapeutic approach to this case. *(The Medical Bulletin of Haseki 2015; 53: 260-2)*

Key Words: Mesh, sacrocolpopexy, erosion

Özet

Apikal cuf prolapsusunun düzeltilmesinde abdominal sentetik meşler geleneksel olarak kullanılmaktadır. Çalışmalarda laparoskopik sakrokolpopeksinin açık abdominal yaklaşım ile karşılaştırılabilir sonuçları ortaya konmuştur. Literatürde mesh erozyon/ekstrüzyon komplikasyonu %2 ile %10 arasında bildirilmiştir. Mesh erozyon tedavisi ile ilgili yapılmış prospektif randomize çalışma yoktur. Biz bu yazımızda laparoskopik sakrokolkopeksiden 3 ay sonra tam kat vajinal meş erozyonu ve bunun tedavi yaklaşımını sunduk. *(Haseki Tıp Bülteni 2015; 53: 260-2)*

Anahtar Sözcükler: Meş, sakrokolpopeksi, erozyon

Introduction

Synthetic mesh has been traditionally used abdominally to correct apical prolapse of the vaginal vault (1). Laparoscopic sacrocolpopexy has been introduced in an effort to decrease pain, reduce recovery, and improve cosmetic results (2). Mesh erosion/extrusion is a well-recognized complication of mesh sacrocolpopexy. Mesh erosion rates with sacrocolpopexy range from 2% to 10% in the literature (3-6). Laparoscopic sacrocolpopexy is performed with different techniques and, thus, has potentially different risks of erosion. No prospective randomized trials have been performed on the treatment of mesh erosion. We present a case of full-thickness vaginal mesh erosion occurred 3 months after laparoscopic sacrocolpopexy.

Case

A 58-year-old gravida 2 para 2 woman presented to our center with a history of a cystocele and apical prolapse repair by laparoscopic sacrocolpopexy using non-coated polypropylene mesh in our hospital. She presented to our facility with vaginal discharge and pain in her right lower quadrant and was found to have extrusion of vaginal mesh at the apex, 3 months after the operation. On physical examination, she had no pelvic organ defect. With speculum examination, serosanguineous discharge was coming from the the vaginal apex, and she had lower quadrant tenderness. An apical, full-thickness vaginal mesh erosion measuring 1-2 cm was noted with surrounding mucus production (Figure 1). A

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computed tomography scan of the abdomen and pelvis with oral and intravenous contrast revealed no evidence of abscess or intraperitoneal fluid collections. Cystoscopy was unremarkable. The patient was given the option of conservative management including pain management with local, systemic analgesia and estrogen therapy or surgical removal. She opted for the latter. After adequate general anesthesia was achieved, the patient was prepped and draped in the usual sterile fashion in dorsal lithotomy position. A Foley catheter was placed in the bladder, a vaginal retractor was placed at the perineum, and the vaginal tissue was retracted appropriately. Sharp dissection was performed to excise the mesh from the vaginal tissue at the apex of the vagina. The mesh was dissected off the surrounding tissue and sutures were cut as the mesh was removed from the tissue. When, in the surgeon's opinion, the dissection extended to the limits of safe visualization or palpation, the vaginal tissue was then denuded to fresh edges and closed with interrupted 3-0 Vicryl sutures. At the conclusion of this procedure, cystoscopy was done and examination was normal. The patient reported resolution of pain and vaginal symptoms in the immediate postoperative period and was discharged home on postoperative day 1. at 6 and 12 weeks, the patient continued to be pain-and discharge-free and has not had any more mesh complications since vaginal mesh removal.

Discussion

Sacrocolpopexy is an efficacious treatment option for women with pelvic organ prolapse with reported success rates ranging from 78% to 100% (7). Laparoscopic sacrocolpopexy has been shown to demonstrate comparable outcomes to the open abdominal approach and result in less pain, decreased blood loss, shorter hospital stay, and reduced recovery time. Disadvantages of a laparoscopic approach include longer operating time and the need for advanced laparoscopic surgical skills (8). In our center, generally, we use laparoscopic approach.

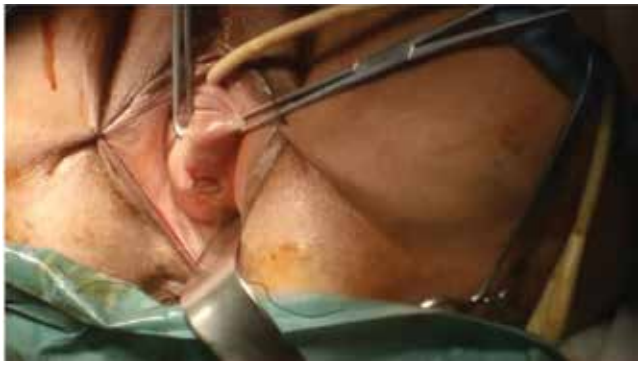

Figure 1. Intraoperative visualization of mesh

We performed laparoscopic sacrocolpopexy in 20 patients between 2012 and 2015. Our complication rate was 0.15%. These include postoperative ileus in one case which treated medically and serosal bowel injury treated by laparoscopic primary suturing. In the patient's initial surgery for pelvic organ prolapse, mesh placement was confidently visualized, the surgery was uncomplicated, and the patient was found to have recovered uneventfully on subsequent follow-up. Mesh erosion associated with pelvic reconstructive surgery is a recognized complication of using synthetic mesh. Erosions may be asymptomatic or may present with infection or fistulae. Tan-Kim J et al. (9) showed that only total vaginal hysterectomy was a significant modifiable risk factor. Our patient underwent hysterectomy 3 years ago, before sacrocolpopexy and had no known risk factor. It has been documented that type of the mesh play a role in the relative risk of developing mesh erosion. In addition, animal studies have demonstrated higher levels of acute inflammation with the collagen non-coated mesh when compared to coated mesh (10). We use non-coated polypropylene mesh at our institution because there is not a statistically significant difference in mesh erosion between the collagen-coated and non-coated material (9). Diagnosis of vaginal mesh exposure in office is relatively straight forward because nearly all exposures can be visualized via speculum examination. (11). We also diagnosed mesh exposure in the office setting. It is not clear in the literature whether there is a difference between success and failure of the mesh excision in patients who were prescribed postoperative antibiotics. We routinely use postoperative antibiotics in our clinic. Mesh erosions are managed both conservatively and surgically. Lowman et al. have reported that 18.5% of cases of mesh erosion were treated successfully with vaginal estrogen or antibiotic cream, however, our patient refused conservative therapy (12). In a study by South et al., (13) 3 surgical techniques were utilized for eroded meshes: transvaginal excision, endoscopic-assisted transvaginal excision, and laparotomy. Timmons et al. (14) reported that 7 of 16 patients, who underwent partial transvaginal excision, subsequently developed recurrent symptoms. However, these authors also choose to repeat transvaginal management, given their experience with a case of a highly morbid transabdominal excision. We support this concept and treated our patient without any complication. However, there is no scientific evidence providing specific criteria regarding which patients would benefit from partially vaginal excision versus laparotomy. In conclusion, prospective randomised studies are needed to compare different methods of the treatment of mesh erosion.

Concept: Huseyin Cengiz, Design: Hediye Dağdeviren, **Data Collection Processing:** Murat Ekin, **Analysis or Interpretation:** Çağlar Helvacıloğlu, **Literature Search:** Ammar Kanawati, **Writing:** Hüseyin Cengiz, **Peer-review:** Internal peer-reviewed, **Conflict of Interest:** No conflict of interest was declared by the authors, **Financial Disclosure:** There is no financial disclosure.

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