

Contents lists available at [ScienceDirect](http://www.sciencedirect.com)

## International Journal of Surgery Case Reports

journal homepage: [www.casereports.com](http://www.casereports.com)

# Prolene mesh migration into the rectum after sacral colpopexy presented with frozen pelvis<sup>☆</sup>



Suat Can Ulukent<sup>a</sup>, Bulent Kaya<sup>a,\*</sup>, Orhan Bat<sup>a</sup>, Nuri Alper Sahbaz<sup>a</sup>, Ozlem Akca<sup>a</sup>, Alpaslan Akyol<sup>b</sup>

<sup>a</sup> Kanuni Sultan Suleyman Training and Research Hospital, Department of General Surgery, Istanbul, Turkey

<sup>b</sup> Kanuni Sultan Suleyman Training and Research Hospital, Department of Gynecology and Obstetrics, Istanbul, Turkey

## ARTICLE INFO

## Article history:

Received 13 June 2013

Received in revised form 26 July 2013

Accepted 8 August 2013

Available online 8 September 2013

## Keywords:

Sacral colpopexy

Mesh

Migration

## ABSTRACT

**INTRODUCTION:** Pelvic organ prolapse (POP) is a common gynecological problem. Repair with synthetic materials such as prolene mesh has become a popular approach in prolapsus surgery. Migration of synthetic materials can cause serious complications.

**PRESENTATION OF CASE:** A 69-year-old woman was admitted to the hospital with a complaint of sensation of fullness and a feeling of a foreign material protruding during defecation. The patient underwent exploratory laparotomy. Prolene mesh was detected in sacral region but resection of the mesh could not be conducted because of dense adhesions causing frozen pelvis. The migrated prolene mesh was resected transanally.

**DISCUSSION:** Genital prolapse or genital hernia is described as the protrusion of pelvic organs along the vagina. It is one of the common gynecological conditions that affect the quality of life in women. Mesh migration is a well-known clinical pathology.

**CONCLUSION:** Mesh migration is a serious complication after sacral colpopexy. Surgical resection of migrated mesh can be difficult due to dense adhesions.

© 2013 The Authors. Published by Elsevier Ltd on behalf of Surgical Associates Ltd. All rights reserved.

## 1. Introduction

Pelvic organ prolapse (POP) is an important gynecological problem for women worldwide. The use of synthetic material such as prolene mesh in prolapsus surgery has become a popular approach. It has been proven to be very effective and became a standard of care in the treatment of most cases with severe prolapsus. Sacropexy is a surgical repair technique that restores pelvic anatomy by attaching synthetic graft material into the vagina and sacrum. It was first described by Arthure in 1957.<sup>1</sup>

Mesh migration can be seen in 0.8–19% of cases of abdominal sacral colpopexy.<sup>2,3</sup> Erosion of vaginal wall or bowel can be seen as a long term complication. In this paper, we present a patient suffering from mesh migration into the rectum after abdominal sacral colpopexy.

## 2. Presentation of case

A 69-year-old woman was admitted to the hospital with a complaint of sensation of fullness and a feeling of a foreign material protruding during defecation. She had been diagnosed with uterine prolapsus and stress incontinence in 2008 and underwent total abdominal hysterectomy, bilateral salpingo-oophorectomy and sacral colpopexy with prolene mesh. The patient was admitted to our clinic five years after the procedure with complaints mentioned above. There was a foreign material palpated in rectum with digital examination. Rectosigmoidoscopy revealed prolene mesh material about 10 cm from anal verge (Fig. 1). The patient was diagnosed with mesh migration into the rectum. The patient underwent exploratory laparotomy. Prolene mesh was detected in sacral region but resection of the mesh could not be conducted because of high levels of adhesions in that region. The migrated prolene mesh was resected by transanal approach (Fig. 2). The postoperative period was uneventful.

## 3. Discussion

Genital prolapse or genital hernia is described as the protrusion of pelvic organs along the vagina. It is one of the common gynecological conditions that affect the quality of life in women. It may be seen in up to 50% of multipara women, and its incidence increases with age. High rates of recurrence with traditional techniques led to

<sup>☆</sup> This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial-No Derivative Works License, which permits non-commercial use, distribution, and reproduction in any medium, provided the original author and source are credited.

\* Corresponding author. Tel.: +90 05056822101.

E-mail address: [drbkaya@yahoo.com](mailto:drbkaya@yahoo.com) (B. Kaya).

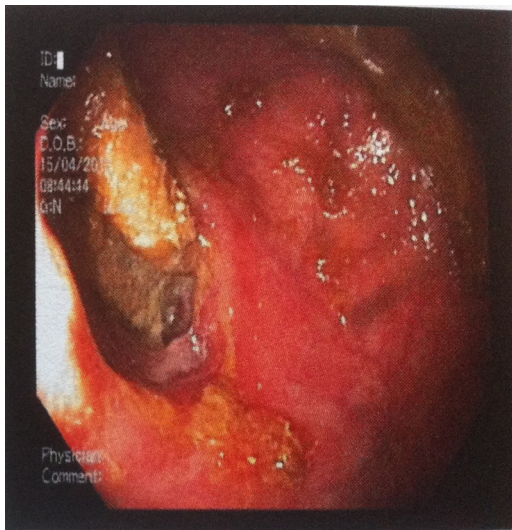


Fig. 1. Prolene mesh was detected in rectum during rectosigmoidoscopy.

the development of new surgical techniques. The use of synthetic mesh has become more popular surgical approach in cystocele and rectocele repair.

Mesh migration is a well-known clinical pathology and have been reported in literature.<sup>4,5</sup> The definitive mechanism for migration of a mesh has been discussed. Yolen and Grossman<sup>6</sup> suggested that intra-abdominal foreign bodies (like mesh) transmigrate into the small or large bowel by triggering an inflammatory reaction. Persistent inflammatory reaction causes an opening into a hollow organ assisted by the peristaltic movement of the bowel. Insufficient fixation of a mesh is another factor for migration of synthetic materials in some patients. Another possible causative factor for mesh migration is selection of graft material. Macroporous, monofilament, soft polypropylene meshes are suggested. Larger pores greater than 75 nm permit the migration of macrophage and leukocyte migration and reduce the infection rate. Large pores also

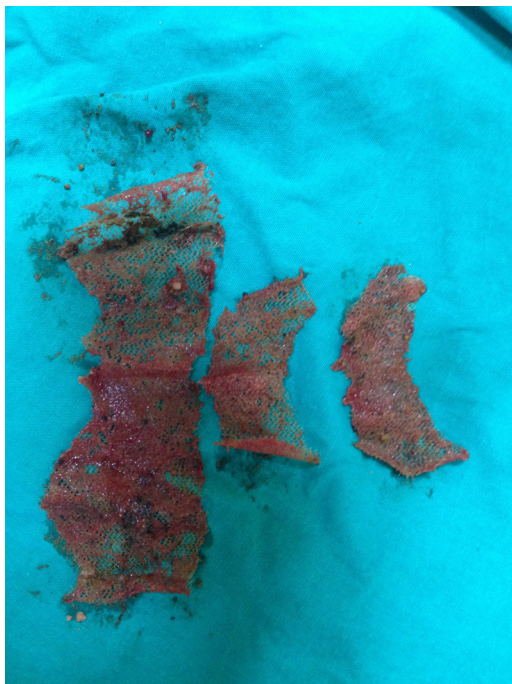


Fig. 2. Resected mesh material.

improves flexibility of the mesh and cause tissue ingrowths and healthy collagen deposition.<sup>7</sup>

Complications reported after sacropexy include ileus, intraoperative vessel injury, ureter injuries, recurrent descensus and mesh tearing.<sup>8</sup> The use of a mesh as a graft material results in higher success rates but also causes a higher number of complications, such as mesh erosions or chronic infections.<sup>9</sup> Sola was used polypropylene mesh in 31 patients with cystocele or rectocele. There were no long term complication with mesh such as vaginal or rectal protrusion.<sup>10</sup> Bujons et al. reported vaginal protrusion of a prolene mesh after cystocele repair.<sup>11</sup> Taoka<sup>12</sup> reported a case of rectal migration of mesh in a 64-year-old woman who presented with a recto-cutaneous fistula 11 months after a tension-free vaginal (TVM) repair; the patient was treated by removal of the infected mesh and closure of the rectal wall defect under cover of a temporary colostomy. By contrast with the troublesome symptoms reported in such patients in the literature, the only presenting complaint of our patient was protrusion of foreign material from the rectum.

#### 4. Conclusion

In conclusion, mesh migration is a serious complication after sacral colpopexy. Sometimes surgical resection of migrated mesh with laparotomy can be difficult due to dense adhesions.

#### Conflict of interest

There was no competing interest in this study.

#### Funding

None.

#### Ethical approval

We have obtained written, informed consent from the patient for publication.

#### Author contributions

SCU was responsible for writing, conception and design of the study; OB contributed toward analysis and interpretation of data; NAS, OA, AA- performed acquisition of data; BK drafted the manuscript.

#### References

1. Arthure HG, Savage D. Uterine prolapse and prolapse of the vaginal vault treated by sacral hysteropexy. *J Obstet Gynaecol Br Emp* 1957;**64**:355–60.
2. Brizzolara S, Pillai-Allen A. Risk of mesh erosion with sacral colpopexy and concurrent hysterectomy. *Obstet Gynecol* 2003;**102**:306–10.
3. Govier FE, Kobashi KC, Kozlowski PM, Kuznetsov DD, Begley SJ, McGonigle KF, et al. High complication rate identified in sacrocolpopexy patients attributed to silicone mesh. *J Urol* 2005;**65**:1099–103.
4. Nelson EC, Vidovszky TJ. Composite mesh migration into the sigmoid colon following ventral hernia repair. *Hernia* 2011;**15**:101–3.
5. Sztikar B, Yzet T, Auquier M, Robert B, Lafaye-Boucher N, Verhaeghe P, et al. Late complications from abdominal wall surgery: report of three cases of mesh migration into hollow viscus. *J Radiol* 2010;**91**:59–64.
6. Yolen SR, Grossman ET. Colonoscopic removal of a postoperative foreign body. *J Clin Gastroenterol* 1989;**11**:483.
7. Stepanian AA, Miklos JR, Moore RD, Mattox TF. Risk of mesh extrusion and other mesh-related complications after laparoscopic sacral colpopexy with or without concurrent laparoscopic-assisted vaginal hysterectomy: experience of 402 patients. *J Minim Invasive Gynecol* 2008;**15**:188–96.
8. Ross JW, Preston M. Laparoscopic sacropexy for severe vaginal vault prolapse: 5-year outcome. *J Minim Invasive Gynecol* 2005;**12**:221–6.
9. Fatton B, Amblard J, Debodinance P, Cosson M, Jacquetin B. Transvaginal repair of genital prolapse: preliminary results of a new tension-free vaginal mesh

- (Prolift. technique) – a case series multicentric study. *Int Urogynecol J Pelvic Floor Dysfunct* 2007;**18**:743–52.
10. Sola V, Pardo J, Ricci P, Guiloff E. Tension free monofilament macropore polypropylene mesh (Gynemesh PS) in female genital prolapse repair. *Int Braz J Urol* 2006;**32**:410–4.
  11. Bujons A, Errando C, Prados M, Báez C, Arañó P, Villavicencio H. The presence of a prolene mesh in the vagina. *Arch Esp Urol* 2006;**59**:627–31.
  12. Taoka R, Mizuno K, Matsuoka T, Kita Y, Nakanishi S, Asai S, et al. Case of rectal migrating of mesh after TVM (tension-free vaginal mesh) operation. *Nihon Hinyokika Gakkai Zasshi* 2011;**102**:726–30.

#### Open Access

This article is published Open Access at [sciedirect.com](http://sciedirect.com). It is distributed under the [IJSCR Supplemental terms and conditions](#), which permits unrestricted non commercial use, distribution, and reproduction in any medium, provided the original authors and source are credited.