

**Case Report**

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## Gluteal-sacrospinous-vaginal fistula as a complication of sacrospinous ligament fixation after a vault prolapse: A case report

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**Abstract**

**Background:** Vault prolapse has a negative impact on women's quality life as a result of associated ano-rectal, urinary and coital dysfunctions. One of the most common surgical procedures for the treatment of vault prolapse is sacrospinous ligament fixation. In this report we present an uncommon case of a gluteal-sacrospinous-vaginal fistula complication after this procedure.

**Case presentation:** A 63-year-old woman with a history of multiple procedures to repair vault prolapse and cystocele was referred to our institution with a nodule 5 X 4 cm in the left buttock. Magnetic Resonance Imaging and endoanal ultrasound confirmed an extrasphincteric gluteal-sacrospinous-vaginal fistula with purulent drainage in her vagina.

A multidisciplinary approach was performed with Urogynecology, traumatology and colorectal surgeon. A fistulectomy was executed successfully. Posterior controls revealed an asymptomatic patient.

**Conclusions:** This case report revealed an uncommon complication of sacrospinous fixation and the importance of a multidisciplinary approach and treatment with notable results.

**Keywords:** complication; sacrospinous fixation; fistula; pelvic organ prolapsed; abscess; gynaecology; mesh.

**Abbreviations:** POP: Pelvic Organ Prolapse; MRI: Magnetic Resonance Imaging; cm: centimetre.

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## Introduction

Vaginal vault prolapse happens when the top of the vagina (the vault) slips from its normal position and sags down and it sometimes happens after a hysterectomy [1]. Prolapse does have a negative impact on these women's quality of life due to associated urinary, ano-rectal, as well as coital dysfunction [2].

One of the most common surgical procedures for the treatment of vault prolapse is sacrospinous ligament fixation [2], also referred to as sacrospinous ligament suspension. Utero-sacral ligaments originate over the region of the greater sciatic foramen and lateral sacrum and insert into the side of the cervix as well as the upper one-third of the vagina [2]. The ligament can be identified on pelvic examination by palpating the ischia spine and tracing posteriorly and medially to the sacrum. Marking sutures are placed on the vaginal epithelium at the site where it will attach to the sacrospinous ligament [3].

Known complications of this technique are: buttock pain and recurrent cystocele but there are also rare complications [4]. Long term complications, as anterior vaginal wall defects are reported in less than 20% of the cases [5].

In this report we present an uncommon case of a gluteal-sacrospinous-vaginal fistula complication after sacrospinous ligament fixation surgery to correct vault prolapse.

## Case presentation

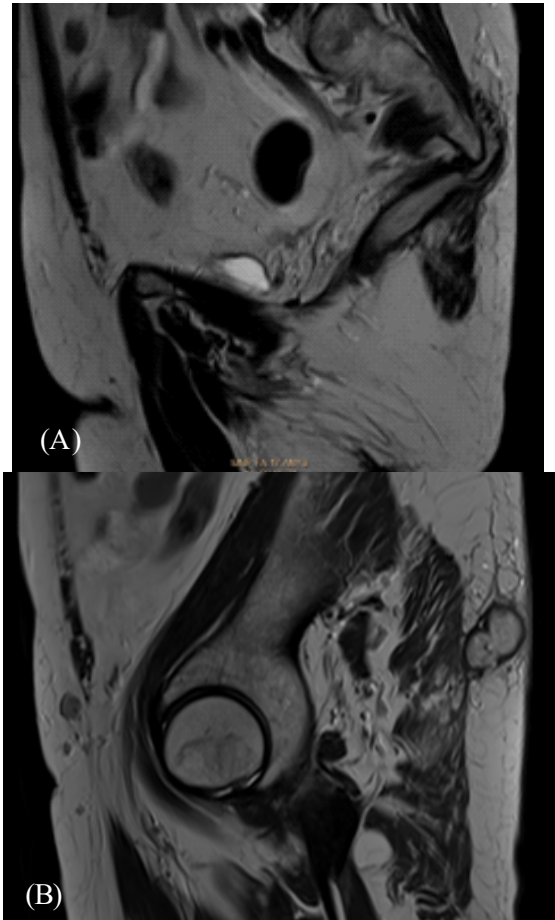
A 63-year-old woman with a history of multiple surgeries: An abdominal hysterectomy for myomatous uterus in 2003; an anterior colporrhaphy with a transobturator vaginal tape and a unilateral Richter (by placing polypropylene suture into the sacrospinous ligament using Miya Hook) for a cystocele, vault prolapse and stress incontinence, and an anterior and posterior Vypro II mesh (a large-pore-sized multifilamentous polypropylene) in 2004; a contralateral Richter for recurrent cystocele, vault prolapse and a rectocele in 2005; and an anterior Prolift (monofilament polypropylene mesh) mesh for recurrent cystocele in 2007, presented with a nodule measuring 5 X 4 centimetres in the left buttock compatible with an abscess in 2017 (Figure 1).



**Figure 1:** View of physical examination. Erythematous zone that corresponds to a deep nodule of 5 centimetres on the left superior buttock and it's defined enclosed by surgeon's fingers.

At the same time, the patient presented with purulent drainage in her vagina. Oral Antibiotic treatment was given to the patient and the patient improved. After several similar episodes a pelvic MRI was performed. The MRI showed an extrasphincteric fistula arising from the inferior rectum at 1 o'clock (left antero-lateral) with an ascendent path crossing the left major incisura ischiatica and ending in a cul de sac at the sacrum ischiatic major level (Figure 2).

An endoanal ultrasound was performed and no internal or external fistula appeared.



**Figure 2:** MRI image showed a well-defined hyperechoic area corresponding to a extrasphincteric fistula (a) arising from inferior rectum at 1 o'clock an ascendant path crossing to the greater sciatic notch and ending in a cul de sac at sacrospinous ligament. The course was widening (From 1mm to 27mm) in a blind collection (b). Oedema and inflammation around the muscles (Gluteus, piri-formis) were also found.

A fistulectomy was performed with collaboration of urogynecologists, colorectal surgeon and traumatologist.

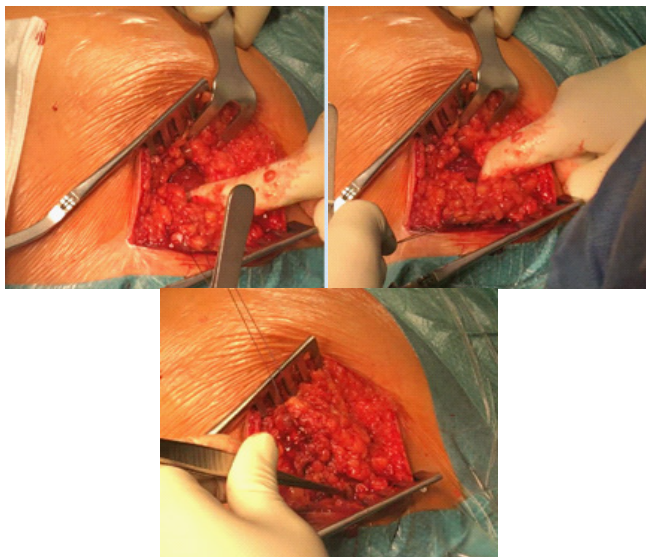
Firstly, the reproduction of vaginal dissection for sacrospinous fixation failed to allow for visualization of the offending sutures, meshes, fistula or purulent drainage.

After that, a curvilinear incision on the left sacroiliac joint with the patient in left lateral decubitus was performed, following a dissection and it was identified a subcutaneous pocket as a reaction to odd body. Subsequently, a dissection through the gluteal fascia and excision of the subcutaneous pocket was

performed. Presence of fistula emanating from permanent polypropylene through major incisura ischiatica was identified. After the placement of drainage, a communication with the vaginal ceiling was identified (Figure 3,4). The last step was closing by planes and closure of vagina.



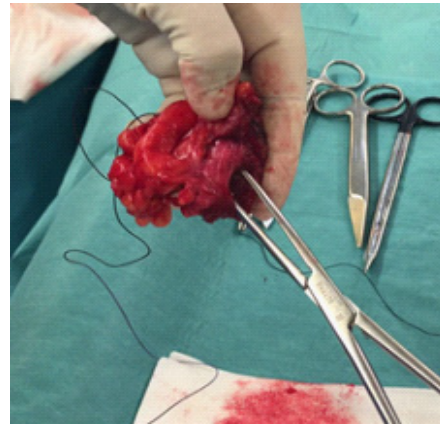
**Figure 3:** Clinical image obtained during the surgery. After the placement of drainage, a communication with the vaginal ceiling was identified. The drainage is held by a Rochester-Pean-Forceps.



**Figure 4:** Clinical image obtained during the surgery. First, a curvilinear incision was performed on the left sacroiliac. It was executed a dissection and identification of a subcutaneous pocket as a reaction to an odd body. Subsequently, a dissection through the gluteal fascia and excision of the subcutaneous pocket was completed.

Afterward, the pathology results showed findings were compatible with a fistulous tract (Figure 5). In the culture of the fistula's cavity grew *Streptococcus constellatus*.

At the last follow up visit, the fistula was healed and the patient presented a mild asymptomatic prolapse.



**Figure 5:** Clinical images of the fistula emanating from permanent polypropylene through major incisura ischiatica, the hole is held by a Rochester-pean forceps, once removed from the patient.

### Discussion

Pelvic Floor Prolapse (POP) is due to the weakness of supporting tissues of pelvis, and associated with risk factor like age, parity, postmenopausal estrogenic deprivation, obesity, instrumental vaginal delivery, congenital defects, race, smoking, cronical disease that increase intrabdominal pressure (chronic constipation, pulmonary disease) or surgical removal of the uterus [6].

Recurrence rates after surgical correction of pelvic organ prolapse are not clear, but it's estimated to 2 and 3.6 for 1000 women/year [7]. Risk of vaginal vault prolapse is 11-19% throughout women's life post hysterectomy surgery.

Vaginal vault prolapse is the descent of the vaginal cuff below a point that is 2 cm less than the total vaginal length above the plane of the hymen [8].

It has a negative impact on women's quality life as a result of associated ano-rectal, urinary and coital dysfuntions [2]. Main known symptoms are: Vaginal Bleeding, pressure in the pelvis, urinary incontinence, constipation.

The correction of vaginal vault prolapse, with the aim of restoring normal vaginal support should primarily be determined by the patient's symptoms and should be fully discussed with the woman before the procedure.

A variety of procedures exist for surgical treatment, one of most common and used procedures is Sacrospinous fixation. Described for the first time by Richter in 1968, who modified the Amreich procedure in 1951.

Several systematic reviews have shown that sacrospinous fixation is an effective therapy for vault prolapse with low recurrence and complication rates [9].

Haemorrhage is the most common complication during the procedure, because of the damage of the pudenda artery or hypogastric venous plexus. Other postoperative complications described are: Gluteal pain, vault haematoma, anterior wall defect, urinary tract infection, sensory loss [10]. The use of non-absorbable sutures (polypropylene) contributes better long-term results and anatomical support. The suture could act as a foreign body and lead to the formation of a fistula [11,12].

The treatment options consist of fistulotomy or fistulectomy. [5].

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## Conclusion

Gluteal-sacrospinous-vaginal fistula is an uncommon complication after sacrospinous fixation.

Few cases are described in the literature. Optimal treatment for a fistula involves reducing the risk of recurrence and increasing the quality of life.

As is shown in our case, pelvic MRI is important in the diagnosis also an endoanal ultrasound in order to detect those which could present an anorectal involvement.

This previous evaluation is important to offer an accurate diagnosis, an appropriate treatment and a multidisciplinary approach.

## Declarations

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**Ethics approval and consent to participate:** Parc Taulí Commission noted that this report does not require consent to participate.

**Consent for publication:** Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the consent is available for review by the Editor-in-Chief of this journal.

**Conflicts of interest:** The authors declare that they have no competing interests

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