Ischiorectal Abscess and Ischiorectal-Vaginal Fistula as Delayed Complications of Posterior Intravaginal Slingplasty

A Case Report

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BACKGROUND: Synthetic meshes have been used extensively to augment surgical management of pelvic organ prolapses. Posterior intravaginal sling (IVS) is a technique used for correcting vaginal vault/apical prolapse, posterior vaginal prolapse or rectocele. There are limited data on long-term safety of this procedure. In a subanalysis of the IVS tapes from the SUSPEND trial performed secondary to the large number of patients with complications of suburethral sling erosions after IVS, it was noted that the sling erosion tended to have a delayed presentation secondary to poor incorporation of the mesh.

CASE: A 48-year-old woman with cystocele, uterine prolapse and rectocele had undergone total vaginal hysterectomy, mesh-augmented anterior repair, posterior colporrhaphy and posterior intravaginal slingplasty (IVS) in July 2005. Thirty months after the surgery, she presented with gradual symptoms of copious vaginal discharge for several weeks followed by constant right buttock pain and swelling. Examination was notable for intact mesh with no signs of erosion and a 3-cm induration deep within the right buttock. Computed tomography suggested a pelvic abscess. Magnetic resonance imaging confirmed a right ischiorectal fossa abscess and a vaginal fistula. The patient underwent sling excision, right ischiorectal fossa exploration and vaginal fistula repair. A fistulous tract was found to extend along the intact sling from the vaginal epithelium toward the right ischiorectal fossa. At 2 months’ follow-up, there were no recurrences or other complications.

CONCLUSION: This is the first report of a delayed complication of an ischiorectal abscess associated with an ischiorectal-vaginal fistula that presented 30 months after the placement of a posterior IVS. (J Reprod Med 2009;54:645–648)

Keywords: ischiorectal abscess, mesh erosions, pelvic organ prolapse, posterior intravaginal sling, vaginal fistula.

Synthetic meshes have been used extensively to augment surgical management of pelvic organ prolapse.
lapses. Posterior intravaginal sling (IVS) is a technique used for correcting vaginal vault/apical prolapse, posterior vaginal prolapse or rectocele. The IVS tape is a multifilament, macroporous type III polypropylene mesh. Type III meshes have been reported to have poor tissue integration, with associated high erosion and reoperation rates of 17% and 24%, respectively. There are limited data on long-term safety of this procedure. In a subanalysis of the IVS tapes from the SUSPEND trial performed secondary to the large number of patients with complications of suburethral sling erosions after IVS, it was noted that the sling erosion tended to have a delayed presentation secondary to poor incorporation of the mesh.

We present a report of a delayed complication of an ischiorectal abscess associated with an ischiorectal-vaginal fistula that presented 30 months after the placement of a posterior IVS. With the increased number of case reports describing unusual complications associated with posterior IVS, there is a need for more scrutiny of the use of synthetic meshes for pelvic organ prolapse.

**Case Report**

A 51-year-old woman (gravida 1, para 1, spontaneous vaginal delivery 1) presented with complaints of copious vaginal discharge followed by constant right buttock swelling and pain. Approximately 30 months prior to her visit, she had undergone total vaginal hysterectomy, anterior colporrhaphy with polypropylene mesh augmentation, posterior colporrhaphy and posterior IVS for cystocele, uterine prolapse and rectocele at the same institution. The initial surgery was uncomplicated, with the posterior intravaginal slingplasty performed as the last procedure. The operative note described the placement of the tunneler trocar through the ischiorectal fossa and iliococcygeus muscle and into the vagina, with no evidence of rectal injury on examination. The patient recovered uneventfully and 30 months later she presented with the above complaints.

The patient’s symptoms started with vaginal discharge that began gradually and worsened over a period 2–3 weeks before she noticed pain and swelling in the right buttock. She was able to elicit the vaginal discharge by pressing on her buttocks near the ischial tuberosity. On examination, there was no evidence of prolapse recurrence or notable vaginal discharge. Anterior mesh was palpated without tenderness and visually noted to be intact, as was the posterior IVS. Rectal examination confirmed the absence of any palpable mass, but a 3-cm induration deep within the right buttock was noted. Pressure on the induration failed to elicit any vaginal discharge. The patient denied any fever, but given her symptoms, she was empirically treated with ciprofloxacin and metronidazole for presumed pelvic abscess with communication into the vagina with concern about vaginal fistula.

Initial computed tomography (CT) was negative for pelvic collection. After a 2-week course of antibiotics, the patient reported improvement in pain and resolution of the vaginal discharge. Examination revealed a decrease in the right buttock induration. However, the symptoms returned 3 weeks later. Magnetic resonance imaging (MRI) confirmed the presence of a thick-walled collection in the right ischiorectal fossa.

**Figure 1** MRI image depicting the abscess within the right ischiorectal fossa.

This case illustrates the need for pelvic surgeons to be aware of the potential late manifestations of delayed complications associated with the placement of vaginal-perineal meshes and the use of multifilament mesh.
ischiorectal fossa with a track to the vagina representing an abscess (Figure 1) and a vaginal fistula (Figure 2) that extended from the vagina deep into the subcutaneous fat of the right ischiorectal fossa. On a further review of the initial CT, the presence of the collection noted on MRI was also present on the initial CT. However, given the inherent limitations of CT, the finding was declared to be “suggestive but not definitive” of a pelvic collection.

Thirty-four months after the initial surgery, the patient underwent a complete sling excision, right ischiorectal fossa exploration and vaginal fistula repair. Intraoperatively, a 2-mm defect approximately 4 cm proximal to the introitus was noted in the vaginal epithelium, with IVS tape exposure. A fistulous tract was found to extend along the intact sling from the vaginal epithelium toward the right ischiorectal fossa. A midline incision was created from the introitus up to the area of the fistula. The fistula and fistulous mucosa were excised. Subsequently, using sharp and blunt dissection, the track of the entire IVS tape was identified and developed. Both sides of the tape were excised intact with no evidence of tissue ingrowth (Figure 3).

The patient recovered uneventfully. There were no recurrences or other complications, such as dyspareunia, pain or abnormal vaginal discharge at 2 months’ follow-up.

Discussion
This is a case report of delayed complications of an ischiorectal abscess accompanied by an ischiorectal-vaginal fistula that formed 30 months after the placement of a posterior IVS. A Medline review of the literature from 1970–2008 using the keywords posterior IVS, vaginal fistula and ischiorectal abscess revealed no published case reports.

Synthetic meshes have gained increasing popularity in the surgical management of pelvic organ prolapse. Type III meshes were initially introduced to reduce the incidence of complications associated with nylon tape. Based on a recent 2-year, prospective, multicenter study evaluating the use of the IVS Tunneller device, posterior IVS appeared to be safe and highly efficacious. However, in recent years, type III meshes have been increasingly found to be associated with complications after their use for prolapse surgery. Mikos et al. nicely summarized the most recent clinical experience with posterior IVS in peer-reviewed journals that had follow-up ranges between 7 weeks and 29.8 months, with the reports describing prolapse recurrence rates of up to 29%, vaginal tape erosion rates of up to 12.7% and other complications, such as gluteal skin infection, rectum perforation, rectal erosion, pain syndrome, dyspareunia and intractable mesh infection. Other serious complications, such as rectocutaneous fistula, gluteovaginal sinus formation and rectovaginal fistula have been reported as case reports associated with placement of a posterior IVS.

Mesh characteristics, such as pore size, nature of fibers, polymer type and porosity, can contribute toward mesh complications by affecting the ability of cells such as macrophages and fibroblasts to infiltrate the material and thus influencing the in vivo reactions to the material and the eventual integra-
tion of the mesh into tissue. To explain why the fistula formed in our case, we believe that the initial defect in the vaginal epithelium from mesh erosion secondary to foreign body reactions and the overall poor incorporation of mesh into the tissue created a communication between the vaginal epithelium and the ischiorectal fossa that led to the development of the abscess. The vaginal extrusion was not recognized on the initial examination secondary to the size of the defect (<2 mm). This underscores the occasional limitations of office examinations as patient discomfort often limits the extent of pelvic examinations, especially the amount of manipulation needed to detect millimeter-sized defects.

In summary, the literature on posterior IVS experience has been limited to case series and one 2-year, prospective, multicenter study with no studies found, to the best of our abilities, reporting on randomized, controlled trials of posterior IVS. Although the continued popularity of incorporating synthetic meshes into prolapse surgery is expected, the experience from the literature suggests a need for a more critical assessment of any new synthetic material before its application into clinical practice. This case illustrates the need for pelvic surgeons to be aware of the potential late manifestations of delayed complications associated with the placement of vaginal-perineal meshes and the use of multifilament mesh. There is a great need for more research on the reasons for mesh complication, which in turn can help pelvic surgeons better select suitable candidates for mesh usage in indicated cases.

References