Using the Uterus to Close a Pelvic Defect After Primary Perineal Posterior Hernia Repair: Report of a Case

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Abstract
Perineal hernias rarely develop spontaneously, and their treatment is controversial. We report a case of a primary perineal posterior hernia in an 81-year-old woman, who presented with progressive bulging in the perineal area, preventing comfortable excretion. The diagnosis was established by herniography. We operated via an abdominal approach and repaired the hernia by reconstructing the pelvic floor using the uterus. To our knowledge, reconstruction using the uterus to repair a pelvic defect has not been reported before.

Key words Perineal hernia · Pelvic floor hernia · Abdominal approach · Repair of perineal hernia

Introduction
Perineal hernias are divided into two principal types according to whether they lie anterior or posterior to the transverse perinei muscle.1 Primary perineal posterior hernias are extremely rare, and many techniques for repairing the pelvic defects have been described. The complex anatomy of the pelvic floor varies individually, making surgery difficult. We report this case to demonstrate the advantage of using the uterus for the repair of pelvic floor defects.

Case Report
An 81-year-old woman was referred to us for investigation of a 5-cm perineal protrusion on the right side of the anus, causing discomfort and preventing comfortable excretion for the previous 3 months. The patient had no history of perineal surgery, although she had undergone left ovarium extirpation for an ovarian tumor. Otherwise, her medical history was unremarkable.

Anorectal examination revealed no masses or hemorrhoids, but with increased abdominal pressure, we observed a 5.0-cm bulging in the region between the right side of the anus and the vagina (Fig. 1). When external pressure was applied carefully, the bulging completely disappeared. A gap on the right side of the anus was palpable in the pelvic floor in the horizontal position. Herniography showed a 5.0-cm hernia, containing the bowels, penetrating externally through the gap (Fig. 2). Magnetic resonance image (MRI) and computed tomography (CT) did not show the hernia, because the bulging completely disappeared in the horizontal position.

The patient was placed in the lithotomy position and a midline incision was made in the lower abdomen. Exploration of the bowels revealed a perineal hernial orifice, nearly 5.0 cm in diameter, through which a hernial sac was palpable. The right lateral and dorsal borders of the hernial orifice consisted of the levator muscles. The left lateral border was formed by the right wall of the rectum, and the anterior border was formed by the posterior vaginal wall and superficial transverse perinei muscle (Fig. 3). Thus, we diagnosed a primary perineal posterior hernia. We decided not to use mesh for closure because it could not be placed overlapping in a satisfactory manner.

First, the sac was pulled out from the orifice, then the sac and uterus were adapted strongly with 3-0 Prolene sutures. The sac and the uterus were also fixed to the pelvic peritoneum with 3-0 Prolene sutures (Fig. 4). Closure of the abdominal wall and skin concluded the operation. The patient was discharged from hospital, free of complaints, after 7 days. More than 1 year later, the patient reports comfortable excretion and no incon-
Discussion

Perineal hernia is one of the least common types of hernia. It mainly occurs secondary to urogenital/gynecological operations or after rectal cancer surgery. Primary forms of this hernia are extremely rare. It usually occurs between the ages of 40 and 60 years and is five times more common in women than in men, due to the broader female pelvis and attenuation of the pelvic floor during pregnancy. Symptoms of perineal hernias are rarely pronounced. The presence of an uncomplicated, soft, reducible mass is most common. Strangulation is unusual because the hernia neck tends to be wide and the muscular defect elastic. There are two types of perineal hernia: anterior and posterior, separated by their position relative to the transverse perineal muscle. The orifice of the anterior form is located in the urogenital diaphragm, so clinical manifestation is a prolapse in the area of the labia. The posterior form is rarer, and the orifice is located either in the levator ani muscle itself or between the levator ani muscle and the coccygeus muscle, so clinical manifestation is a unilateral bulging of the gluteal or perineal region, as seen in our patient. If the hernia remains midline, it may pass forward into the vaginal wall or posteriorly into the rectum. If large, it may pass distal to the anal verge and mimic a rectal prolapse. Therefore, perineal hernias may be mistaken for other disorders of the perineum and adjacent organs, such as lipomas, fibromas, rectocele, cystocele, or prolapse of the rectum. To confirm the diagnosis several diagnostic studies are available, including sonography, CT, MRI, and herniography, as in the present case. An upright position during the examination enables the identification and anatomic association of the protruded bowel segment. Repair of a perineal hernia is a challenging surgical problem and while various methods have been described, the ideal approach has yet to be established. This might be attributed to the complex anatomy of the pelvic floor. Identification and mobilization of the muscular and fascial components can be very difficult.

To the best of our knowledge, there are only four reports in the English literature detailing primary perineal posterior hernia. Table 1 summarizes the gender, age, size, chief complaints, and methods of repair in these four reports. All four patients were women aged between 64 and 81 years. The hernia ranged from 4.0 to 22 cm in size, and the most common chief complaint was the prevention of comfortable excretion. Two hernias were repaired by primary suturing and two by mesh. The repair was performed via an abdominoperineal approach in three of the four patients. In one of the two hernias repaired by primary suturing, the rectus abdominis muscle was used as a supportive sling to reinforce the perineal hernia repair. We used only the uterus itself for closure of the pelvic defect in our patient.

Although we must consider the long-term complications of this type of repair, our patient remains free of recurrence 1 year after her operation. Thus, based this experience we conclude that primary perineal posterior hernias may be repaired using the uterus itself for closure of the orifice.