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Lee S W[1], Yoon J H[1]
1. *The Catholic University of Korea*

A LAPAROSCOPIC SACROHYSTEROPEXY TO MANAGE UTERINE PROLAPSE IN A YOUNG WOMAN AFTER SURGICAL FAILURE BY A VAGINAL APPROACH

Hypothesis / aims of study

Pelvic organ prolapse caused by pelvic trauma, including pelvic fracture, is rare, and few reports exist. Direct injury to the pelvic floor and indirect damage to the muscles and connective tissue supporting the pelvic floor can result in uterine prolapse and pelvic floor dysfunction. Surgical and medical correction of these conditions is important to improve quality of life and preserve fertility in young women. Here, we describe the management of a young woman who presented with uterine prolapse after pelvic trauma.

Study design, materials and methods

A 22-year-old woman with uterine prolapse visited our clinic. She had a history of a pubic bone fracture due to a traffic accident at the age of 3 years and had undergone conservative treatment. Symptoms of uterine prolapse had existed since puberty, but became aggravated during the previous 3 months. Stage III uterine prolapsed (International Continence Society classification) was observed on pelvic examination. The Pelvic Organ Prolapse Quantification (POP-Q) values were: Aa = +1, Ap = +1, Ba = +2, Bp = +1, C = +2, D = +1, Gh = 4, Pb = 4, and TVL = 8. Her body mass index was 21.2.

To treat the prolapse, we initially performed a sacrospinous ligament fixation, posterior colporrhapy, and levatoplasty. However, after 3 weeks, she revisited our clinic with recurrent prolapse symptoms. A pelvic exam revealed a broken 1-0 Prolene suture at the sacrospinous ligament. We considered this a case of surgical failure and sought an alternative surgical procedure. We decided to perform a laparoscopic sacrohysteropexy using non-absorbable mesh, to preserve fertility. The procedure was performed under general anaesthesia with the patient in the low-lithotomy position. To remove the broken 1-0 Prolene, a vertical incision of the posterior fornix vaginal epithelium was made via a vaginal approach. The peritoneum over the sacral promontory was opened and carried down over the anterior surface of the sacrum. The rectosigmoid colon was reflected to the left to expose the presacral area. The aortic bifurcation was palpated, and the right ureter was retracted laterally. The peritoneum on the sacral promontory was bluntly dissected and undermined through the right uterosacral ligament. The right uterosacral ligament peritoneum was opened and dissected, to avoid ureteral injury. A subperitoneal tunnel into the cul-de-sac was created by blunt and sharp dissection. A rectangular polypropylene type-1 monofilament macroporous non-absorbable mesh (Ethicon Inc., Somerville, NJ, USA) was introduced through the 10-mm trocar into the supraumbilical area and placed under moderate tension from the sacral promontory to the right uterosacral ligament. The mesh was sutured to the periosteum of the sacral promontory with three non-absorbable 1-0 Prolene sutures and to the right uterosacral ligament with two 1-0 Prolene sutures. The apical vaginal wall and the peritoneum over the sacrum and right uterosacral ligament were closed with 2-0 Vicryl (Fig. 1).

Results

The patient recovered without complications, and was discharged 2 days after surgery. At the 12-months and 3-years follow-up, she was asymptomatic. The vaginal epithelium was intact, and no mesh-related complications had occurred.

Interpretation of results

Several operations have been proposed for treating uterine prolapse and preserving the uterus, including sacrospinous hysteropexy, posterior intravaginal slingplasty, and laparoscopic suspension of the uterus, using techniques such as ventrosuspension and uterosacral plication.

Sacrohysteropexy involves suspending the uterus from the sacral promontory using polypropylene mesh. Previous studies showed successful laparoscopic sacrohysteropexy for correcting of POP. We used polypropylene mesh to suspend the uterus from the sacral promontory by fixing the mesh to one uterosacral ligament. We believe that POP resulting from pelvic trauma is associated with disruption of the structures supporting the upper vagina, cervix, and uterus. Therefore, a surgical technique that suspends the uterus from the sacral promontory is an appropriate choice.

Concluding message

We report a surgical technique for correcting uterine prolapse with uterine preservation via a laparoscopic approach after a surgical failure by a vaginal approach. A laparoscopic sacrohysteropexy is a safe and effective procedure or women who want to preserve the uterus.

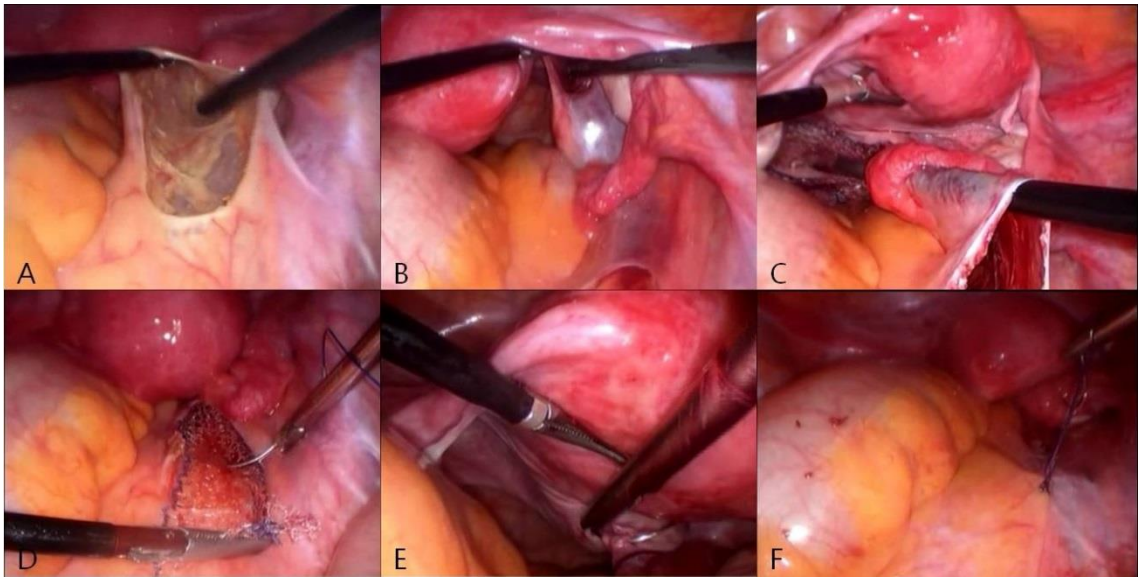

Fig. 1. Laparoscopic sacrohysteropexy surgical technique. (A) Opening of sacral promontory peritoneum. (B) Blunt dissection of the pelvic peritoneum and formation of a window for mesh insertion into the right uterosacral ligament. (C) Mesh insertion through the windows. (D) Mesh placement on the sacral promontory, and suturing of the mesh over the sacral promontory peritoneum. (E) Suturing of the mesh over the right uterosacral ligament. (F) Mesh in place and peritonization complete.

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Disclosures

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