The First Laparoscopic Vesicovaginal Fistula Repair in Iran

1Alireza Farshi, 2Reza Sari Motlagh, 3Reza Roshandel

ABSTRACT

Background: Vesicovaginal fistula (VVF) is the most common acquired fistula of the urinary system. Different surgical techniques exist, but having several advantages make laparoscopy as a favorable method. According to the recent data, we have performed the first laparoscopic repair of VVF in Iran.

Case report: A 19-year-old (G1P1) woman, referred to our center, complaining from continuous urinary incontinence from 7 months ago. She developed continuous wetting after her first cesarean section, performed 7 months ago. Methylene blue dye test, was positive for VVF and voiding cystourethrogram (VCUG) confirmed the diagnosis. Cystoscopy revealed the exact location of fistula in the bladder wall. Patient underwent laparoscopic VVF repair using transperitoneal transvesical approach in the supine position. Patient did not have any urinary leakage during hospitalization and discharged with urethral indwelling catheter at fourth day after the operation. Voiding cystourethrogram was done after 2 weeks, and it was normal without any extravasations.

Discussion: Dense pelvic adhesions and/or inflammation from prior abdominal surgery can make this approach less desirable in some patients. Furthermore, intracorporeal laparoscopic suturing requirement for VVF repair is an advanced skill many surgeons lack. We used transabdominally transvesical laparoscopic method and, according to the literature review, this is the first case of VVF laparoscopic surgery performed in Iran.

Keywords: Laparoscopy, Vesicovaginal, Fistula.

How to cite this article: Farshi A, Motlagh RS, Roshandel R. The First Laparoscopic Vesicovaginal Fistula Repair in Iran. World J Lap Surg 2014;7(1):45-47.

Source of support: Nil

Conflict of interest: None

INTRODUCTION

Vesicovaginal fistula (VVF) is the most common acquired fistula of the urinary system. Since 1663, when Hendrik Von Rouwhuyshe described the first VVF surgery, several surgical techniques have been developed, such as trans-abdominal approaches, which have their own advantages and disadvantages. Laparoscopic repair of VVF is an alternative approach for traditional open surgery, and has short convalescence period and less morbidity. According to the recent data, we have done the first laparoscopic repair of VVF in Iran.

CASE REPORT

A 19-year-old (G1P1) woman was referred to our department with continuous urinary incontinence from 7 months ago. She had history of an elective cesarean section (CS) 7 months ago, and she had been developed continuous wetting postsurgically.

She did not have any history of another operation or urologic disease. The physical examination was normal with the, exception of vaginal watery discharge. Methylene blue dye test was positive of VVF. Afterward voiding cystourethrogram (VCUG) confirmed the diagnosis. The patient underwent cystoscopy and IVP. Cystoscopy revealed the intravesical location of fistula, with the hiatus at the posterolateral wall. Upper urinary tract was normal in IVP and it did not reveal coincidental ureterovaginal fistula.

Patient was considered for laparoscopic VVF repair. Bilateral ureteral DJ stents were placed by cystoscopy and an additional ureteral catheter was passed through the fistula into the vaginal portion for identification of the fistulous tract. Then, in supine position, three trocars (two 10 and one 5 mm) inserted into the abdomen. First trocar was placed under direct vision in the periumbilical area. And, the two trocars—10 and 5 mm were placed at the midclavicular line into the outer border of rectus muscle. A clamped Foley catheter with an inflated balloon and moist sponge was placed in the bladder and vagina. After releasing adhesion bands, result of previously CS surgery, a vertical incision was made from the dome of bladder toward the fistulous tract (Figs 1A to D). After entering to the posterior edge of fistula, the bladder was completely dissected from the vagina. The vagina was repaired using 3/0 vicryl sutures (Figs 2A to C) and a large omental flap was interposed between the vaginal sutures and bladder. Bladder wall was closed using 2/0 vicryl in one layer (Figs 3A and B).

Patient did not have any urinary leakage during hospitalization and discharged with urethral indwelling catheter after 4 days. Voiding cystourethrogram was done at 2 weeks later and it was normal without any extravasations. The urinary catheter was removed at the same time. After 3 months, the patient did not have any urinary leakage.

DISCUSSION

Dense pelvic adhesions and inflammation from prior abdominal surgery can make this approach less desirable in some patients. Furthermore, intracorporeal laparoscopic

1Assistant Professor, 2Senior Resident, 3Resident

1-3Department of Urology, Tabriz University of Medical Sciences, Tabriz, Iran

Corresponding Author: Alireza Farshi, Assistant Professor Department of Urology, Tabriz University of Medical Sciences Tabriz, Iran, e-mail: farshiar@yahoo.com
Figs 1A to D: A vertical incision was made from the dome of the bladder toward the fistula tract. The DJ stent in ureters, and gray stent in fistula hiatus.

Figs 2A to C: The vagina was closed by 3/0 vicryl sutures.
The First Laparoscopic Vesicovaginal Fistula Repair in Iran

Figs 3A and B: A large omental flap was interposed between the vaginal sutures and bladder then bladder was closed by 2/0 vicryl in one layer.

suturing requirement for VVF repair is an advanced skill many surgeons may lack. Regarding these limitations, the laparoscopic VVF repair has not been widely adopted.

We used transabdominal-transvesical laparoscopic method and, according to the literature review, this is the first case of VVF that has been repaired by laparoscopic technique in Iran. Although this method is difficult in VVF cases, but has long-time efficacy compared with the open transabdominal-transvesical approaches.7

Laparoscopy has been increasingly popular in reconstructive urology surgeries.8 Considering the capabilities of Iranian surgeons in this field, laparoscopic surgery can be applied effectively in the management of VVFs. The approach is safe and provides all advantages of minimally invasive surgery. Shorter hospital stay and shorter recovery time have a positive effect on the patients’ well being.7,8 More recent methods have been described, such as laparoendoscopic single-site surgery (LESS), using the triport and skipping the bladder intact.9 More prospective studies are needed to fine out its differences with traditional method in outcome and morbidity-mortalities. This method has been used in cases with recurrent VVF too, and studies have shown acceptable results.10

REFERENCES