



Laparoscopic repair of a vesicovaginal fistula: Our experience

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We present the case of a 73-years-old woman who underwent a transvaginal repair for pelvic organ prolapse.

Following removal of the urinary catheter, the patient complained about continuous urinary leakage from the vagina.

A CT scan with additional 3d reconstruction of the obtained images was performed. The examination documented an iatrogenic vesicovaginal fistula.

A fistula was also confirmed by a flexible cystoscopy.

Laparoscopic repair of the fistula was indicated.

The procedure was performed under general anesthesia in the steep Trendelenburg position.

A preliminary rigid cystoscopy with bilateral ureteral catheterization (7 F ureteric catheters) was performed in order to protect the ureters during the dissection maneuvers. Catheterization of the vesicovaginal fistula with another ureteral catheter was also performed in order to facilitate its intraoperative identification.

The first step of the surgery was the lysis of the adhesions between the ileal loops and the pelvic sidewalls, as a result of the previous surgery.

The pelvic cavity was inspected, and the main anatomical landmarks were identified.

A 3 cm horizontal peritoneal incision between the bladder and vagina was performed and the intervalvesicovaginal space was dissected with a combination of blunt and sharp maneuvers.

A retractor was inserted into the vagina to facilitate dissection.

The fistula was identified by the visualization of the previously placed ureteric catheter. Its margins were resected reaching well vascularized tissue.

The dissection of the intervalvesicovaginal space proceeded to obtain adequate bladder margins – that allowed for a tension-free suture – to be applied.

The vaginal portion of the fistula was closed with a vertical single-layer running suture with V-Lok 2-0.

The inner layer of the bladder portion of the fistula was horizontally sutured with V-Lok 2-0. Adequate bladder closure was confirmed by the hydrostatic leak test at 250 cc.

Finally Vicryl 2-0 was used for the closure of the outer layer of the bladder.

The bladder and vaginal suture lines had perpendicular directions in order to avoid their overlap.

After reducing the Trendelenburg and the pressure of the pneumoperitoneum, an attempt to interpose an epiploic appendix of the sigmoid colon between the suture lines of bladder and vagina was tried. The maneuver was unsuccessful since it caused tension and angulation of the sigmoid.

Thus, harvesting an omental flap was chosen. The flap was successfully interposed between the two suture lines. Further stitches stabilized the flap to the bladder serosa.

Operating time was approximately 120 min.

Only traces of blood loss were observed.

No intraoperative or postoperative complications occurred.

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Three weeks after surgery a retrograde and micturating cystogram was performed that demonstrate into any leaks. The urinary catheter was removed.

At 12 months of follow-up there were not signs of recurrence of the fistula.

The laparoscopic technique represents a feasible and effective option for the repair of vesicovaginal fistulae.

CRediT authorship contribution statement

Gaia Colalillo: Conception, Design of the work, Analysis, Interpretation of data, Writing – original draft, Provided final approval of the version to be published, Investigation. **Giuseppe Farullo:** Involved in the patient's care. **Simone Albisinni:** Involved in the patient's care. **Gabriele Falconi:** Involved in the patient's care. **Enrico Finazzi Agrò:** Provided final approval of the version to be published, Investigation. **Anastasios D. Asimakopoulos:** Conception, Design of the work, Analysis, Interpretation of data, Writing – original draft, Provided final

approval of the version to be published, Investigation, Involved in the patient's care.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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All authors contributed to the article and approved the submitted version.

Appendix A. Supplementary data

Supplementary material related to this article can be found online at <https://doi.org/10.1016/j.cont.2023.100591>.