

Atrophic Vesicovaginal fistula secondary to a third-degree Cystocele in an 89-year-old patient

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Abstract

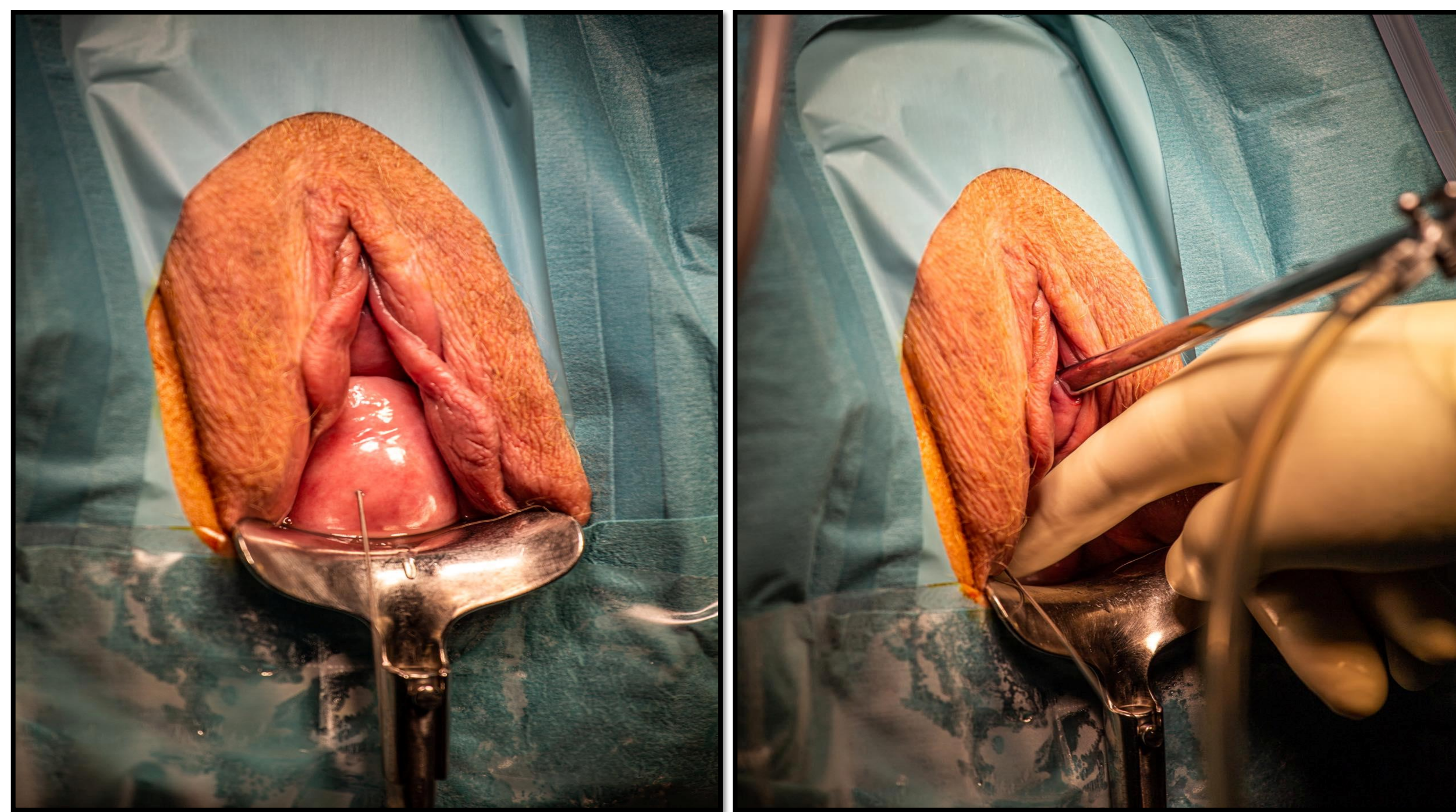
While Vesicovaginal fistula is a very rare encountered urogynecological entity in developed countries such as Germany, it is a very common urogynecological problem in developing countries mostly due to obstructed labor. We are reporting a very unusual case of Vesicovaginal fistula in an 89-year-old woman that developed secondary to atrophy in the vaginal mucosa due to a long standing untreated third-degree cystocele. Vaginal examination revealed atrophic and unhealthy vaginal mucosa. It showed a single fistula measuring 2 to 3 mm about 6 cm away from the urethral meatus in the midline slightly to the left. Cystoscopy showed a single fistula tract measuring around 3 mm about 4 cm from the bladder neck in the midline and around 2 to 3 cm away from the ureteric orifice on both sides so that the insertion of ureteric stents was not necessary. The patient was treated at first for 6 weeks with vaginal Estrogen cream to improve the vaginal mucosa thickness preoperative. Vaginal approach of Vesicovaginal Fistula repair using Petros flap interposition was performed which was successful and the ascending cystogram two weeks post-operative revealed no leakage. The patient was doing well during the follow-up 3 and 6 months postoperative.

Background

Obstructed labor is the main reason for Vesicovaginal fistulas in the developing countries. It accounts for about 1–3/1000 deliveries in West Africa. Vesicovaginal fistula is not only a medical condition, but it also accounts for major psychological, social, and sexual problem making the woman suffer from huge distress. Obstructed labor may be the main reason accounting for Vesicovaginal fistulas, but this does not mean that cesarean sections come without risk for genitourinary fistulas. Complicated cesarean sections performed mainly in small not well-equipped health centers by unqualified surgeons can also result in genitourinary fistulas mainly uterovesical fistulas. In that case patients complain of hematuria during menstruation as a result of passage of menstrual blood through the fistula tract causing the hematuria which also known as Youssef syndrome. Regarding vaginal atrophy, it is a common problem with elderly patients as a result of estrogen deficiency which impair the viability of the vaginal mucosa. In cases of vaginal or uterovaginal prolapse; this causes the exposure of the vaginal tissue to more friction and dryness added to the estrogen deficiency which can cause serious problems up to ulcers and fistulas.

Case presentation

An 89-year-old woman came to our clinic complaining of continuous leakage of urine with no relation to cough or urgency. She reported that the urinary leakage is more when she stands up or while walking. Regarding medical history she complained from diabetes mellitus type 2 and Hypertension which was good controlled. She had no problem in defecation or urination except that she noticed reduced frequency of urination. Upon examination she had a third-degree cystocele with atrophic and unhealthy vaginal mucosa. A single fistula tract measuring 2 to 3 mm was seen about 6 cm away from the urethral meatus in the midline slightly to the left. There were no signs or symptoms of stress urinary incontinence. No other fistula tracts were seen in the vagina.

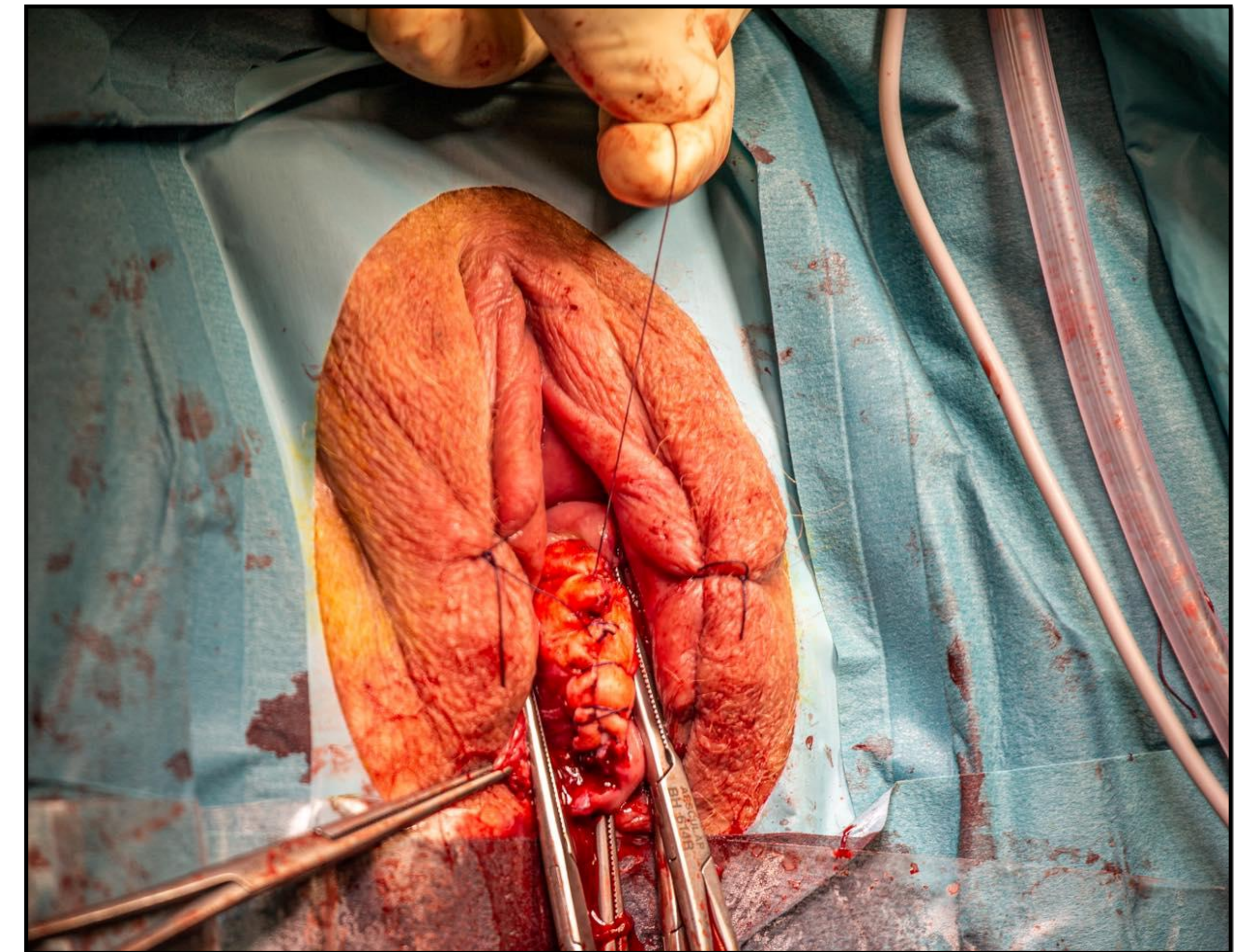
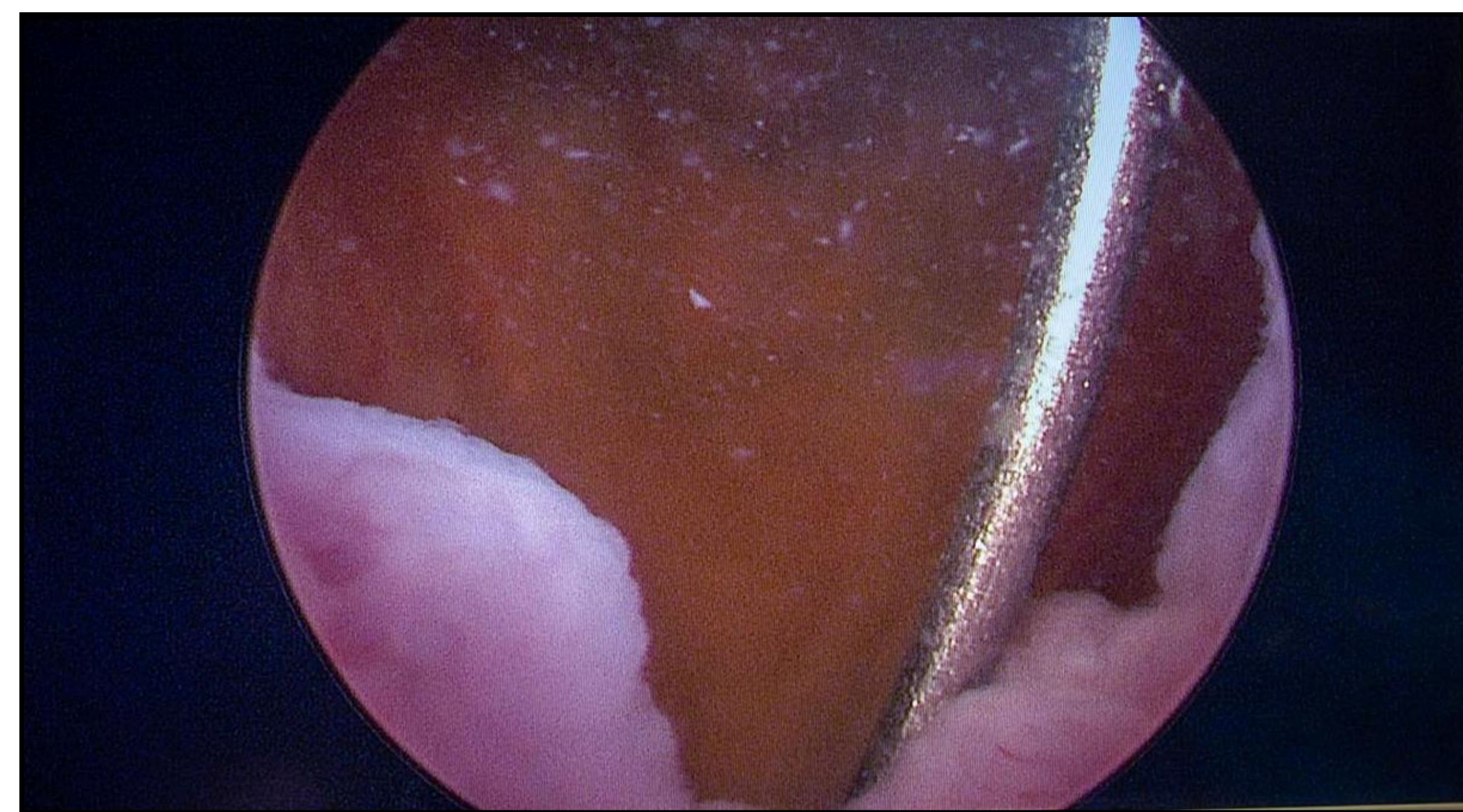


Investigations

Because of the advanced age of the patient, a complete laboratory tests, ECG and Echocardiography were done. Urine analysis and urine culture were also done which revealed urinary tract infection that was treated with intravenous antibiotics according to the sensitivity test done with the urine culture. Patient was also treated with local estrogen cream 6 weeks preoperative to improve vaginal mucosa thickness preoperative. Patient was informed about her condition and the suggested surgical management with all possible complications and risk of recurrence.

Treatment

After approval of the patient, we performed vaginal approach of Vesicovaginal Fistula repair with intraoperative cystoscopy. Cystoscopy showed a single fistula measuring around 3 mm about 4 cm from the bladder neck in the midline and around 2 to 3 cm away from the ureteric orifice on both sides so that no ureteric stents were necessary pre- or intraoperative. Because of the third-degree cystocele combined with the Vesicovaginal fistula we decided not to perform martius flap but to use Petros flap to both repair the fistula by adding an additional layer separating the bladder from the vagina and to repair the cystocele without using a proline or other types of mesh. We performed a spindle shaped excising the fistula tract. The bladder was then opened, and we trimmed the edges of the bladder incision to ensure better blood supply and so better healing of the edges. About one centimeter lateral to the incision on both sides we started to dissect the vagina from the bladder. After that an adequate vaginal tissue flap was prepared on the right side of the incision. Then we started deepithelialisation of the vaginal flap using cautery until the vaginal epithelium was peeled of this vaginal flap. To close the incision, we first closed the bladder incision in two layers; first continuous sutures and then interrupted sutures using 3-0 Vicryl. Then we performed anterior repair by suturing the fascial layer between the vagina and the bladder. After that we sutured the vaginal flap stretching it from the right side to the left side of the incision using interrupted 2-0 Vicryl sutures. At the end we sutured the edges of the vaginal mucosa using interrupted 2-0 Vicryl sutures. Intraoperative methylene blue test was performed, and no leakage was detected. We performed a cystoscopy again to make sure that the ureteric orifices on both sides were away from the incision and the sutures and we inserted suprapubic catheter.



Outcome and follow-up

Patient was discharged 3 days postoperative with clear urinary flow in the suprapubic catheter and no leakage in the vagina. She was advised to continue use the estrogen cream for six weeks postoperative. Two weeks postoperative we performed ascending cystogram which revealed no leakage, and the procedure was successful. After performing bladder training the suprapubic catheter was removed and the patient was able to urinate and completely empty the bladder with less than 30 ml residual volume. Three and six months postoperative, the patient came for her follow-up, and she was satisfied with no urinary leakage or other complaints. Vaginal examination revealed complete healing of the incision and complete repair of the cystocele.

