

## LAPAROSCOPIC TRANSVESICAL SURGERY FOR INTRAVESICAL PATHOLOGIES

### Introduction

Pathologic conditions involving the urinary bladder such as fistulas, calculus or foreign materials that had eroded into the bladder, can be managed through different surgical routes. These include vaginal (1), transurethral (2) and abdominal (either transperitoneal or transvesical). The choice of surgical approach depends on the nature, size and the location of the pathology and often on the surgeon's personal preference and skill. During the last 2 years, eight women with a variety of bladder pathologies have been treated in our tertiary referral Urogynecology center using the laparoscopic transvesical approach.

In this video we present a case of polypropylene mesh erosion into the bladder and demonstrate our surgical technique of managing bladder pathologies.

### Design

We describe in details the surgery in which the eroded mesh was removed from the bladder and the short-term postoperative outcome. Additionally we present our experience of eight women who underwent laparoscopic transvesical surgery for the management of various bladder pathologies.

### Results

A 54 year old female was referred to our unit due to recurrent urinary tract infections, stress incontinence and dyspareunia, all started following a total abdominal hysterectomy and sacral-colpopexy two years earlier. On examination marked vaginal tenderness was noted and palpation reproduced the pain she experiences during sexual intercourse. Diagnostic cystoscopy revealed a 2 by 1 cm intravesical mesh erosion, 1cm far from right ureteric orifice and 2 cm from the left. At laparoscopy, the dome of the bladder was opened using scissors with unipolar diathermy. The eroded mesh was identified and both ureters were catheterized. The intravesical portion of the mesh was excised using scissors. The bladder was gently mobilized from the underlying vagina and the defect was closed with four interrupted 2/0 Polyglactin sutures. The ureteric catheters were removed and the bladder was sutured in two layers. Watertightness was confirmed at 300 ml. The indwelling urethral catheter was left for ten days, and removed after bladder integrity was confirmed by a CT cystourethrogram. Eight women underwent laparoscopic transvesical surgery for the following indications: Vesicovaginal fistula (2), bladder calculus (2), mesh erosion (3) and mesh erosion with fistula (1). The mean age ( $\pm$ SD) was 60.4 (12.4), mean BMI ( $\pm$ SD) 26.7 (6.8) and median parity 4 (range 3-7). The clinical presentation included continuous urine leakage (3), recurrent urinary tract infections (2), vaginal / bladder pain (2), dyspareunia (1) stress incontinence (1) and vaginal spotting (1). In all cases the same surgical principles were applied as described above. Postoperative CT confirmed an intact bladder with no extravasation of dye in seven women (88%). In one case of bladder mesh erosion, a small leakage was noted. The catheter was left for 3 additional weeks and removed with no further radiologic or clinical evidence of persistence. In another case of vesicovaginal fistula, recurrence was diagnosed one month after catheter removal and managed vaginally without sequela.

### Conclusion

The laparoscopic transvesical route is a safe, efficient and minimally invasive approach for the management of bladder pathologies, offering excellent visualization and magnification of the pathology while keeping safe margins from the ureters throughout the procedure.

### References

1. F. Firoozi et al. Pure transvaginal removal of eroded mesh and retained foreign body in the bladder. Int Urogynecol J 2009 DOI 10.1007/s00192-009-1066-8
2. RB. Nerli et al. Transvesicoscopic Repair of Vesicovaginal Fistula. Diagnostic and Therapeutic Endoscopy 2010 DOI 10.1155/2010/760348

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