

## SVII9: COMBINED LAPAROSCOPIC AND CYSTOSCOPIC APPROACH FOR THE TREATMENT OF BLADDER DIVERTICULA

Francesca Destro\*<sup>1</sup>, Claudio Vella<sup>1</sup>, Claudia Filisetti<sup>1</sup>, Federica Marinoni<sup>1</sup>, Giorgio Selvaggio<sup>1</sup>, Giovanni Di Iorio<sup>1</sup> and Giovanna Riccipetioni<sup>1</sup>

E-mail: Francesca Destro — francesca\_destro@hotmail.com

<sup>1</sup>Buzzi Children's Hospital, Milano, Italy

**Background** Vesical diverticula are permanent hernias of the mucosa through a muscular layer defect of the bladder wall. The definition includes a spectrum of anomalies: congenital, urachal, Hutch-para ureteral and acquired diverticula (iatrogenic or related to obstructive high bladder and bladder-neck pressures).

**Materials and methods** We report two cases of patients with vesical diverticulum treated by a combined laparoscopic and cystoscopic approach.

**Results Case 1:** 4-year old boy with acquired diverticulum, identified on MCUG performed for dysfunctional voiding and infection,. The diverticulum was on the right side, far from the ureter. A 4 trocars laparoscopic approach was carried out : the diverticulum was isolated, its neck freed from the muscular layer, closed with 2 Endoloops and resected. The detrusor defect was closed with interrupted suture. Post-operative and follow-up period were uneventful under medical treatment with alfuzosin hydrochloride.

**Case 2:** 12-year old boy referred after US identification of symptomatic bladder diverticulum. He underwent to MCUG that confirmed the presence of a huge left paraureteral diverticulum without vesico-ureteral reflux. Laparoscopy was performed with 4 trocars: one 10 mm trocar in the umbilicus for the optic and three 3-5 mm operative trocars. The bladder was suspended by an abdominal stitch, the diverticulum dissected under cystoscopic surveillance avoiding damage to the vas and the left ureter. The diverticulum was excised after transfixion suture of its origin, a Lich-Gregoir procedure was performed to avoid post-operative reflux. No complications occurred.

**Conclusions** Vesical diverticula have a prevalence of 1-10% and male preponderance. Urothelial tumor may arise in adulthood in up to 36% of cases. Surgery is indicated in symptomatic cases and consists of diverticula removal and vesical wall reconstruction. Hutch diverticulum requires the management of pathologies related (reflux, megaureter), as well. The combination of laparoscopic and cystoscopic techniques allows a safe and effective resection with all the advantages of the minimally invasive surgery. The identification of the surrounding structures seems optimal and the dissection can be easily extended to the vesico-ureteral junction without damaging the ureter. The safety of the manoeuvre is further increased by the "guidance" of the cystoscope light.

Laparoscopy is a safe and effective procedure for the treatment of vesical diverticula and associated anomalies. The combined

use of cystoscopy is helpful to carry out properly the procedure. Surgery should be planned after accurate evaluation of the low urinary tract of the patient in order to establish the best surgical approach.

**Key words** bladder diverticula, laparoscopy