Laparoscopic Autoaugmentation of the Bladder

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Indications

Autoaugmentation is a useful procedure in neurogenic bladders that have poor compliance, instability, a reasonable capacity, and are not responding to medical management [1–4]. Autoaugmentation is a fair option prior to subjecting the patient to ileocystoplasty (which involves bowel with its inherent immediate and delayed complications).

Preliminary Evaluation

A micturating cystourethrography (MCU), an intravenous urogram (IVU), an isotope renal study, cystometry, and cystoscopy are done to determine the baseline capacity, renal function, compliance, and stability.

Surgical Technique

The patient is placed in the Trendelenburg position and three ports are used: an umbilical port for the telescope, and two ports in the midclavicular line 5 cm below and lateral to umbilicus for hand instruments. The peritoneum over the bladder is incised. Then using hook diathermy, the detrusor is divided. The incision starts vertically from close to the bladder neck and is extended posteriorly (up to the point that the mucosa bulges out). Diathermy should not be used when dissecting close to the mucosa. It is preferable to raise a rectangular flap of detrusor from the anterior wall on either side that can be sutured to Cooper’s ligament, which gives a better long-term result with autoaugmentation. Any inadvertent bladder mucosal injury can be sutured using a 4-0 Vicryl stitch. There is no need for a drain if the mucosa is not breached.
Fig. 23.1. An ultrasound scan shows a thickened bladder wall

Fig. 23.2. A micturating cystourethrography (MCU) shows an irregular contour of the bladder and reflux on the right side

Fig. 23.3. An intravenous urogram (IVU) shows compromised bilateral renal function

Fig. 23.4. External view of the port positions