

Adjustable Transobturator Male System (ATOMS) for Male Post-prostatectomy Stress Urinary Incontinence: Initial Multi-centre Experience in Hong Kong

Introduction and Objective: To retrospectively evaluate the short term outcome of Adjustable Trans-Obturator Male System (ATOMS) for post-prostatectomy stress urinary incontinence.

Materials and Methods: All cases of ATOMS for post-prostatectomy stress urinary incontinence done in Hong Kong up to Mar 2012 were included. Totally 8 male patients mean aged 75 years (range 71 – 78) underwent ATOMS from Mar 2010 - Nov 2011 in four centres. The ATOMS consists of a cushion for supporting the bulbar urethra which is then connected to a port placed subcutaneously in the supra-inguinal area for future pressure adjustment of the cushion.

Results: All 8 patients had prostatectomy performed 1-6 years prior to the ATOMS implantation: laparoscopic radical prostatectomy (4), robot assisted radical prostatectomy (2), laparoscopic converted to open simple prostatectomy (1) and open retropubic radical prostatectomy (1). All had stress urinary incontinence which persisted despite pelvic floor rehabilitation and was confirmed by video urodynamic study. The mean number of pads used was 4 (range 3 – 6). Flexible cystoscopy was done in 5 patients before ATOMS implantation and none had anastomotic stricture. The mean operative time was 78 minutes (range 60 – 100). There was no bladder injury intra-operatively. Three patients had incontinence completely cured without any adjustment required and were all diaper free. Five patients had persistent leakage with adjustment of cuff performed at mean 7 months after ATOMS implantation (range 1 – 17). Average 2.8 ml more saline was injected to the system (range 2 – 5). Within the ATOMS adjustment cases, one patient with prior cystoscopic demonstration of large bladder diverticulum developed retention of urine and required clean intermittent self-catheterization three times per day in addition to spontaneous voluntary voiding. He was still diaper dependant and so adjustment of cuff was performed. Two patients had unsatisfactory urinary control after first adjustment of ATOMS requiring second adjustment. 5.5 ml more saline at 2 months after first adjustment for the first case and 4 ml more at 4 months for the second case. Leakage improved in both cases after second adjustment. Mean follow-up duration is 12 months. There was absence of sling erosion in these patients.

Conclusions: Our early experience demonstrated that ATOMS is efficacious in the treatment of male SUI and had the advantage of being adjustable anytime after operation. Moreover, unlike the artificial urinary sphincter, it spares the patients the stress of having to manipulate the device for micturition. However, longer follow-up and larger case series is required to ascertain its long term efficacy.