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IMPLANTATION OF ADJUSTABLE CONTINENCE THERAPY (ACT) FOR TREATMENT OF STRESS URINARY INCONTINENCE IN ADULTS WITH NEOBLADDERS

Hypothesis / aims of study

The Adjustable Continence Therapy (ACT®) has been used since 2001 for the treatment of male and female stress urinary incontinence. We assessed the feasibility of this post operatively adjustable device in patients with stress urinary incontinence following neobladder formation.

Study design, materials and methods

Three males and two females with neobladder constructions have been implanted with ACT since 2001. Patients were assessed at baseline and post operatively for urinary leakage.

Results

Patient	Previous history	Surgery	Outcome
Female(62 yrs)	ACT in 2001 for severe intrinsic sphincter deficiency.	Cystectomy and creation of Hautman ileal neobladder for invasive bladder cancer (balloons retained)	Complete continence achieved but unable to void, and self catheterizes.
Female(57 yrs)	Cystectomy and formation of Y ileal neobladder in 2006		
Male (63 yrs)			

. The patient was completely incontinent following surgery and did not respond to physical therapy. The patient failed a TOT implantation and remained completely incontinent, and unable to void due to complete incontinence. In December 2007 she underwent revision of the Y neobladder to increase the bladder capacity to 300mls. In March 2008, patient underwent ACT implantation for urethral closure. Patient is pad free and uses self catheterization to drain her bladder

One male aged 63 years underwent Studer neobladder in 2006 and requiring 5 -6 pads /day. Physical therapy yielded no results. Videourodynamics showed a low capacity neobladder and no sphincter activity left, VLPP 15 cm H2O with a neobladder capacity of 120 ml. ProACT implantation was undertaken in 2007 with a final volume 8.7 ml on left and 7.7 ml on right side. No improvement in continence.

One male aged 57 years underwent Studer neobladder creation in 2005, necessitating 8 pads per day post operatively. VLPP was 25 cm H2O with a neobladder capacity 200 ml. ProACT was implanted in 2007 with 2.5 ml required per balloon. Pad usage has decreased to 3 pads/daily and patient is satisfied.

One male patient aged 67 years underwent Hautman neobladder formation in 2006 and was completely incontinent after the procedure. VLPP was 15 cm H2O, with a good neobladder capacity (300 ml) but very short functional urethral length (1 cm). Patient was implanted with ProACT in 2007 but despite adjustment did not improve and the devices were explanted.

Interpretation of results

Treating incontinence in neobladders is a challenging and technically demanding procedure.

The results in the male population after a neobladder are relatively modest (only one third achieved some result, whilst all of our female population achieved a complete dryness). This is probably due to the lower increase in resistances required in females compared to male patients. Further study of this group of patients is required to ascertain the most suitable procedure to address post cystectomy incontinence.

Concluding message

Implantation of ProACT and ACT in patients with neobladders is feasible

Specify source of funding or grant	**Collaboration with Uromedica, Medtronic, Bard and Coloplast**
Is this a clinical trial?	**Yes**
Is this study registered in a public clinical trials registry?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**Ethical Commitee of University General Hospital of Novara**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**