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Grise P[1], Le Long E[1], Rebibo J D[1], Caremel R[1]
1. *Chu Charles Nicolle*

TRANSCORPORAL ARTIFICIAL URINARY SPHINCTER IMPLANTATION FOR INCONTINENCE IN HIGH-RISK PATIENT: FUNCTIONAL OUTCOMES IN A RETROSPECTIVE STUDY

Hypothesis / aims of study
To assess the efficacy of transcorporal artificial urinary sphincter (AUS) implantation on continence for male stress urinary incontinence (SUI) in case of failure of previous surgical treatment or/and radiotherapy.

Study design, materials and methods
A retrospective monocentric evaluation was conducted between march 2007 and august 2012. Thirty-seven male patients treated by transcorporal AUS (AMS800™, AmericanMedicalSystems, USA) implantation for moderate or severe SUI. Thirteen patients had primary placement of transcorporal cuff because of previous radiotherapy. Twenty four patients received transcorporal cuff in salvage secondary procedure after failure of urinary incontinence surgery. Functional urinary outcomes were assessed by daily pad use, 24-hours Pad-test, International Consultation on Incontinence Questionnaire-Short Form (ICIQ-SF). Quality of life and satisfaction was assessed with 2 questionnaires: Urinary Incontinence Quality of life scale (I-QoL) and Patient Global Impression of Improvement (PGI-I) respectively. The primary objective was to assess the continence. Total continence was defined as no urinary leakage and no pad/day. Social continence was defined as less than one pad/day.

Results
At the latest follow-up, a median of 32 months (24-51), the AUS was functioning in 33 patients. The device was definitively explanted in 3 patients and never activated in 1 patient. The total continence rate was 12.1 % and the social continence rate was 69.7%. Six patients (18.2) required more than 1 pad daily and were considered incontinent. Median pad test was 17.5 g (0-159) and mean ICIQ-SF score was 7.3/21 (±5.4). The mean I-QoL score was 93.9/110. A total of 88 % of the patients reported satisfaction with the artificial urinary sphincter. Seventeen patients (45.9%) had required at least 1 surgical revision of artificial urinary sphincter occurred at a median of 8 months. The 5-year actuarial revision-free rate of the cuff was 73.8%. Patients with previous radiotherapy were not more likely to experience revision (p=0.015) unlike patients with previous failure of urinary incontinence surgery (p=0.04).

Interpretation of results
In case of failure of previous surgical treatment or/and radiotherapy, the AUS treatment of SUI have a higher rate of complications than peri-urethral primary implantation or implantation in a non radiated patient. The poor outcome in this difficult population with major incontinence (1) is a key point to accept as good result a minor incontinence with one pad per day. The 88% rate of satisfied patient is lower than peri-urethral primary cuff placement but must be considered as an interesting option. Only few series (2) reported on transcorporeal AUS placement. The other options in case of erosion are tandem cuff or narrow cuff in a lower situation, but many complications were also reported.

Concluding message
Transcorporal AUS cuff placement is a useful alternative for challenging cases of male SUI in case of failure of previous surgical treatment and/or radiotherapy despite a high rate of revision.

References
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