

CLINICAL AND PATIENT REPORTED OUTCOME FOR URETHROPLASTY WITH LINGUAL MUCOSA IN ANTERIOR URETHRAL STRICTURES

Hypothesis / aims of study

This study examined the clinical outcome and patient reported outcome for urethroplasty with lingual mucosa graft.

Study design, materials and methods

Patients over the age of 16 who underwent urethroplasty with a lingual mucosa graft for anterior urethral stricture between 2013 and 2016 were evaluated. Patients with prior urethral reconstructions or hypospadias were excluded. All surgeries were performed by a single experienced surgeon at a secondary referral centre in the Netherlands. Data were collected in retrospect using patient hospital and electronic medical records.

Clinical outcome was evaluated through complications at urethroplasty site, complications at donor site complication rate and success rate. All complications at donor site reported after four months were considered late complications. Success was defined as no need for any subsequent intervention.

Patient outcome was measured by the Urethral Stricture Surgery Patient Reported Outcome Measure (USS PROM) which was translated in Dutch. This questionnaire was validated by Jackson et al (1) in 2011 to standardise patient-centred evaluations for urethral stricture. It evaluates lower urinary tract symptoms (LUTS), health-related quality of life (HRQoL) and treatment satisfaction. All patients completed the questionnaire at 3 months post-operative.

Results

Forty-seven out of sixty-nine patients were included. The mean follow-up was 12 months. Mean age was 56 years (median 62; range 17-80). Stricture aetiology was unknown in 28%, iatrogenic in 36%, blunt perineal trauma in 21%, lichen sclerosus in 11% and infection in 4%.

Success rate and complications at urethroplasty site

Success rate was 87%. 13% had a recurrence which was treated with an urethrotomy. Mean time of recurrence was 13 months with a range of 3.5 to 22.3 months. 21% had a complication at urethroplasty site; infection (13%), leakage on urethrogram (4%), subcutaneous hematoma (2%) and a diverticula (2%).

Early and late donor site complications

Within the first 4 months 21% reported a complication; swelling of the tongue 6%, speech difficulty 6%, altered sensations 6% and sublingual cyst 2%. After 4 months 89% had no oral complications. 6% reported to be bothered by the scar at the donor site. Numbness and decreased motility of the tongue were both reported once.

Patient reported outcome: LUTS, HRQoL and treatment satisfaction

The total LUTS score (0= least symptomatic, 18= most symptomatic) was a median of 3 (mean of 3.3; range 1-9). The median voiding picture score (1= best, 4=worst) was 3. The LUTS-specific QoL question revealed that 65% felt their urinary symptoms interfered "not at all" with their life, 26% reported "a little" interference, 7% "somewhat" and 2% "a lot".

The HRQoL score (100= best imaginable health, 0=worst) was 79.8 (median of 80.0; range 50-100). 71% described themselves as being in full health. Overall 94% was "very satisfied" (53%) or "satisfied" (40%) with the outcome of their urethroplasty. 6% was "unsatisfied". "Very unsatisfied" was not reported. Two patients who were unsatisfied stated it was because of a new problem. One patient was unsatisfied because his urinary condition did not improve after surgery.

Interpretation of results

The success rate and complications found in this study are comparable to the numbers found in previous research. Vanni et al. reviewed literature on lingual grafts and found success rates of 79-90% (2). Our study shows that the majority of the complications at the donor site occur within the first 4 months after surgery. Late complications are mostly mild, which corresponds with previous research (2). In our study a few patients reported to be bothered by the scar tissue. No patient had a speech difficulty after 4 months, which we would consider the most disabling complication of this surgery.

The USS PROM gives us an interesting insight in the patient's perspective. Overall, our patients have a low total LUTS score after surgery. 94% was satisfied with the outcome of their urethroplasty. Recent research by Jackson showed 87% was satisfied after urethroplasty (3). Only one third of our patients report that their urinary symptoms interfere with their life. Quality of life after urethroplasty is scored high with a mean of 79.8. The results of this study indicate that urethroplasty is worthwhile from the patient's perspective.

Concluding message

In conclusion the present study demonstrates that urethroplasty with lingual mucosa has an excellent clinical and patient reported outcome. This procedure results in a high success rate, with few complications. In depth research about different surgical techniques, quality of grafts, donor site morbidity and impact on quality of life is needed to find an optimum solution tailored to each individual patient. We suggest using pre- and postoperative patient reported outcome measures and the development of a validated questionnaire concerning the donor site complications for future research.

References

1. Jackson MJ, Sciberras J, et al. Defining a patient-reported outcome measure for urethral stricture surgery. *Eur Urol* 2011 Jul;60(1):60-8
2. Vanni AJ. New frontiers in urethral reconstruction: injectables and alternative grafts. *Transl Androl Urol* 2015 Feb;4(1):84-91

3. Jackson MJ, Chaudhury I et al. A prospective patient-centred evaluation of urethroplasty for anterior urethral stricture using a validated patient-reported outcome measure. Eur Urol 2013 Nov;64(5):777-82

Disclosures

Funding: None **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** it was a retrospective analysis of patient files **Helsinki:** Yes **Informed Consent:** Yes