

THE USE OF PERMANENT ENDOURETHRAL UROLUME STENTS FOR THE TREATMENT OF VESICAL SPHINCTER DYSSYNERGIA IN PATIENTS WITH COMPLETE SPINAL CORD INJURIES – LONG-TERM RESULTS.

Hypothesis / aims of study

To determine the results of vesical sphincter dyssynergia after the use of UroLume stents in completely paralysed patients who did not decide on other treatment's ways.

Study design, materials and methods

The study was conducted from 1991 to 2001. 13 completely paralysed and tetraplegic patients with severe functional subvesical obstruction were included in this study. The conservative therapy and the surgical treatment were not effective, therefore it was applied the permanent endourethral UroLume stents on the site of external urethral sphincter. The functional subvesical obstruction caused severe symptoms of autonomic dysreflexia or hydronephrosis in this group of patients. In addition, all of them had residual urine (from 90 to 285cc) after spontaneous or provoked micturition what can lead to recurrent or even permanent infection of lower urinary tract. The urodynamic investigations showed that voiding detrusor pressure was 80-170 cm H₂O – an increased risk of vesicoureteral reflux. All patients were male and used external catheters. In 10 cases, the length of stents was 2.5cm and in 3 cases 2.0cm. To have a good covering of external sphincter, we started to release stents distally about 1cm from veru montanum. The total length of UroLume prosthesis inside the urethra was for this size of stent about 5mm longer than originally due to its weak elasticity inside the urethra compared to its elasticity outside the body. However, urethra was calibrated to 28F before applying of stents. After implantation, the patients was left on external catheter. Most of stents was completely covered by urethral mucosa from 3 to 6 months after implantation. In 2 cases, a part of stent was visible much longer and a complete covering by mucosa was observed about 1 year after implantation (Fig. 1).

Results

In all 13 patients, comprehensive control examinations were performed including urethrocystoscopy in 2010 or 2011- the follow-up lasted from 10 to 20 years (mean time - 13 years). Almost all patients had good long-term results of treatment within control examinations excepting 1 patient who it developed a benign prostatic hyperplasia in (10 years after implantation of stent) and transurethral resection was needed using 24F resectoscope. Other patients had a normal size of the urethra without any obstruction (Fig. 2).

Interpretation of results

It was not observed any change of position of the stent during follow-up. In 11 patients who had a hydronephrosis before implantation of stents, it disappeared completely. Only in 2 patients, a moderate enlargement of pelvicalyceal system were observed during control examinations. In group of patients with autonomic dysreflexia symptoms, these symptoms completely disappeared or were only inconsiderable. Residual urine significantly decreased and was only from 30 to 80cc in 5 patients or disappeared completely in 8 patients.

Concluding message

Permanent endourethral UroLume stents could be an alternative treatment's way for paralysed patients with vesical-sphincter dyssynergia when other methods are not effective.

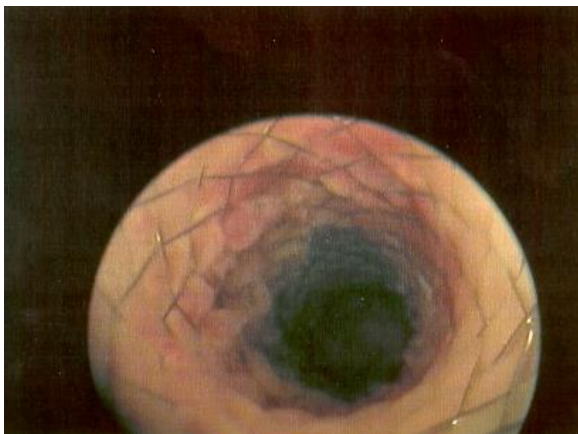


Fig. 1. Stent UroLume directly after implantation

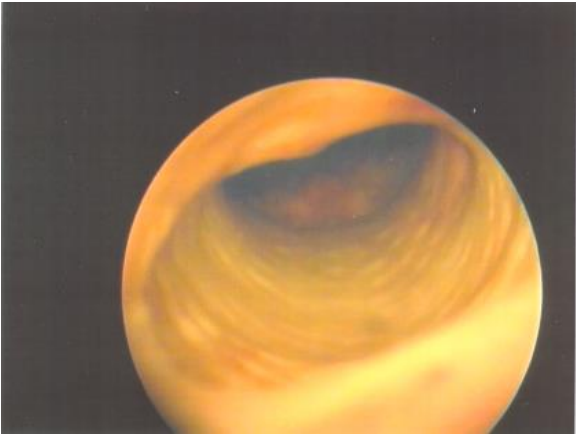


Fig.2. Stent UroLume 10 years after implantation

Disclosures

Funding: NONE **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** - **Helsinki:** Yes **Informed Consent:** Yes