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## **SUBURETERAL INJECTION FOR TREATMENT OF VESICoureTERAL REFLUX IN CHILDHOOD NEUROGENIC BLADDER.**

### Hypothesis / aims of study

Persistent vesicoureteral reflux (VUR) in childhood neurogenic bladder has a risk of pyelonephritis during treatment with clean intermittent catheterization and anticholinergics. We injected Deflux or Macroplastique for correction of reflux and evaluated benefits of the injection.

### Study design, materials and methods

We reviewed 8 patients (M:F 4:4) who underwent subureteral injection (age at injection: 3-16 years old, mean 7 years 3 months). Specific neurologic diseases were spina bifida (6 patients), spinal cord injury (1) and cerebral palsy (1). VUR was confirmed during video-urodynamic study. Detrusor function was detrusor overactivity in 5 patients, acontractile with low compliance in 2 and normal in 1. Two patients had Macroplastique injection initially and received Deflux injection secondarily. One patient had two times of Deflux injection. At 3 months postoperatively, radiologic study for VUR was performed. We considered cure of VUR when the study showed Grade 0 or I.

### Results

Four of six patients who received only Deflux injection showed grade 0 or 1 VUR on following radiologic study. These four patients were diagnosed with spina bifida. The remaining two patients showed no change of VUR grade postoperatively. One of both patients had spinal cord injury and detrusor overactivity. And another patient had spina bifida and acontractile bladder with low compliance. Macroplastique injection was performed in a spina bifida patient with acontractile bladder and low compliance and in another spina bifida patient with detrusor overactivity received Macroplastique injection. Postoperatively first examination showed no VUR in both patients but VUR recurred at 11 years and 2 years later, respectively. Both patients received Deflux injection at the second time. After then former patient showed no VUR, but latter patient showed persistent VUR. Bladder stone developed in former patients at 9 years after Macroplastique injection.

### Interpretation of results

Overall cure rate was 63.5% (5 of 8) after subureteral injection in childhood neurogenic bladder.

### Concluding message

Subureteral injection can be a feasible procedure for correcting persistent VUR in childhood neurogenic bladder patients who are treated with clean intermittent catheterization and anticholinergics.

### Disclosures

**Funding:** none **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics not Req'd:** long period of study **Helsinki:** Yes **Informed Consent:** Yes