

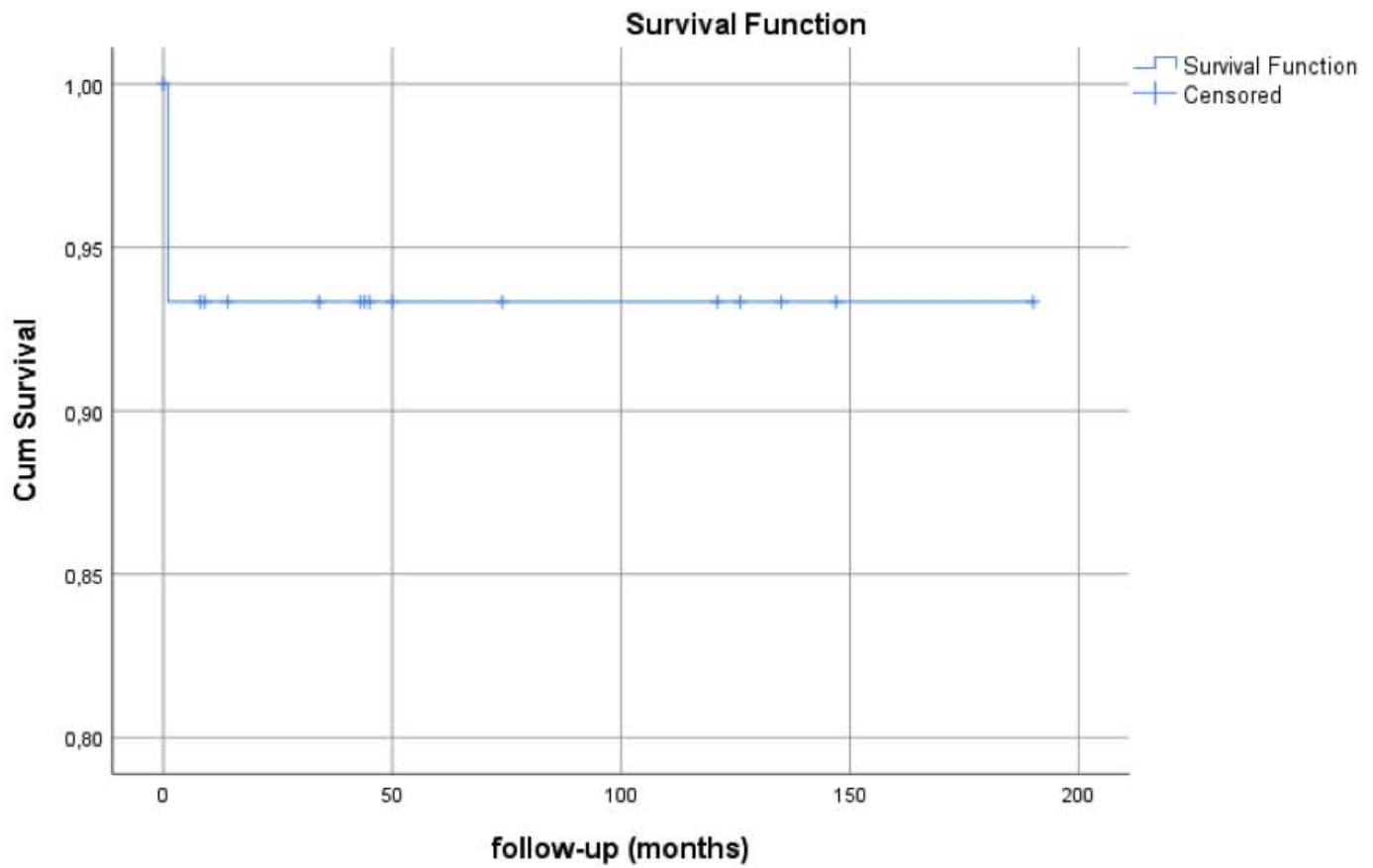
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**Introduction & Objectives:** Traumatic urethral strictures in children and adolescents are rare. Urethroplasty to treat these strictures is challenging but crucial to avoid life-long urinary complications.

**Materials & Methods:** Between November 2001 and October 2017, 16 male children and adolescents ( $\leq 18$  years old; median: 13 years) were treated by urethroplasty for traumatic strictures at a single tertiary referral center for urethral reconstruction in Belgium (G.U.H.). Etiology was iatrogenic (transurethral procedure) in 4 (25%), straddle injury and in 6 (37.5%) and pelvic fracture urethral injury (PFUI) in 6 (37.5%) patients. Stricture location was penile in 1 (6.3%) patient with iatrogenic injury, bulbar in 9 (56.3%) patients (6 straddle injury, 3 iatrogenic) and posterior in 6 (37.5%) patients (All PFUIs). PFUIs and short ( $\leq 3$ cm) bulbar strictures were treated by anastomotic repair ( $n=14$ ; 87.5%). A 6cm-long bulbar stricture and a 3cm-long penile stricture were treated by one-stage substitution urethroplasty with preputial skin. At time of operation, urinary diversion was present in 12 (75%) patients. Complications ( $\leq 90$ days) were recorded according to Dindo-Clavien classification. Failure was defined as obstructive voiding with need for additional urethral instrumentation (including dilation).

**Results:** Median follow-up is 48 (range: 3-190 months). Median operation time was 105 (range: 65-245) minutes. Median hospital stay was 3 (range: 1-7) days. Median duration of catheter stay was 14 (range: 8-38) days. No complications, grade 1 and grade 2 complications were present in respectively 11 (68.6%), 2 (12.5%) and 1 (6.3%). Two (12.5%) grade 3 complications were reported: One child needed anesthesia for reinsertion of a transurethral catheter. A large hematoma was surgically explored and drained in another patient. One (6.3%) patient suffered a failure. It was a PFUI in which not only the membranous urethra was lacerated, but also the prostatic urethra up to the bladder neck. This was the only case in which combined abdominal and perineal exploration was needed. The failure was directly after removal of the catheter. Estimated 5-year recurrence free survival is 93.3 ( $\pm 6.4$ ) % (figure 1).



**Conclusions:** Traumatic urethral strictures are rare. Iatrogenic injury is already in children an important cause of urethral trauma. Reconstruction, mainly by anastomotic repair, has an excellent and stable long-term success rate.