

# Incidence of De Novo Erectile Dysfunction after Urethroplasty: A Prospective Observational Study

## Abstract

**Purpose:** De novo erectile dysfunction (ED) is a known complication after urethroplasty. Incidence and natural history of de novo ED after urethroplasty is underreported. We assessed the incidence of de novo ED after urethroplasty.

**Materials and methods:** Consecutive consenting urethroplasty (n=48) patients aged 21 to 50 years from February 2014 to July 2016 with normal preoperative erectile function as determined by an International Index of Erectile Function-5 (IIEF-5) score  $\geq 22$  were included and interviewed at 3, 6, and 12 months.

**Results:** In patients with anterior stricture (n=40), substitution urethroplasty (SU) was performed in 22 patients (55.0%) and end-to-end anastomotic urethroplasty (EEAU) in 18 patients (45.0%). Their mean IIEF-5 score was  $24.15 \pm 0.8$  preoperatively,  $20.10 \pm 4.2$  at 3 months ( $p < 0.001$ ),  $22.70 \pm 2.3$  at 6 months ( $p = 0.0012$ ), and  $23.70 \pm 1.7$  at 12 months ( $p = 0.03$ ), showing a recovery of erectile function with time. All 8 patients with pelvic fracture urethral injury (PFUI) underwent progressive perineal urethroplasty. Their mean IIEF score was  $24.0 \pm 1.2$  preoperatively,  $18.8 \pm 5.4$  at 3 months ( $p = 0.002$ ),  $20.9 \pm 3.5$  at 6 months ( $p = 0.37$ ), and  $22.0 \pm 1.5$  at 12 months ( $p = 0.427$ ). The incidence of ED was similar at 1 year postoperatively between patients with anterior stricture and PFUI and between patients who underwent EEAU or SU for anterior stricture.

**Conclusions:** Incidence of ED at 1 year after PFUI is similar to that after surgery for anterior stricture in patients with normal preoperative erectile function. Among the cases of anterior stricture, recovery was better with SU at 3 months and was similar between SU and EEAU at 1 year.