

## Clinical Characteristics of Urethral Strictures in Indonesia: The Largest Series from Five Centres

**Introduction and Objective:** We present clinical characteristics of urethral strictures collected from 5 teaching hospitals in Indonesia

**Materials and Methods:** Data collection was conducted in 5 teaching hospitals among 5 high-density population cities in Indonesia (i.e. Surabaya, Malang, Semarang, Surakarta and Denpasar) during the period of 2006-2010. These hospitals were referral centres in their respective regions, with Dr. Soetomo Hospital (Surabaya) as the top-referral centre for East Indonesia. Diagnoses were based on clinical signs and symptoms, confirmed by urethrography. Descriptive data analysis was conducted against 640 samples. Cross-tabulation analysis was also performed to present distinctive characteristics among centres.

**Results:** A total of 640 cases were enrolled in this analysis. Mean age of sample was  $52.2 \pm 17.272$  (3-92) years. Trocar cystostomy, open cystostomy and catheter insertion were the most frequent initial procedures, contributing 42.1 %, 27.4% and 21.9% respectively. Eighty-one percent of samples have not experienced urinary tract infection, while 30.5% had trauma histories and/or instrumentations. Eighty-six percent of samples denied having surgeries previously. Among those who had history of surgeries, more than half underwent Direct Visualised Internal Urethrotomy (DVIU, 62.8%), followed by Primary Endoscopic Realignment (PER, 25.1%) and delayed-repair urethroplasty (13.7%). Partial obstruction was the main cause of stricture (78.6%), with length of fibrosis less than 1 cm (71%) at the bulbous urethral site (33.6%). Most patients underwent DVIU (87.9%) for definitive treatment, followed by external urethrotomy (4.6%) due to severity of disease, and urethroplasty (4.3%). Patients were asked to perform self-catheterization (CIC) for certain time in their lives and to attend the follow-up regularly. The average time to re-stricture in this series was 8.45 months (2-96).

**Conclusion:** Urethral strictures in Indonesia were related to trauma by traffic accidents and history of previous surgery or instrumentation. DVIU was still the main treatment for simple urethral stricture. The short average time to re-stricture pointed out the necessity for better treatment options towards a better outcome, of which cell-based therapy would be one consideration.