AB019. Long-term outcomes of urethroplasty with heterogeneous acellular dermal matrix: a five-case series

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Background: This study aimed to evaluate the longterm results of heterogeneous acellular dermal matrix (HADM) as a scaffold for urethral stricture repair. HADM is commercially available and widely used in plastic surgery, but rarely applied to urethral reconstruction.

Methods: Five patients with a diagnosis of recurrent urethral stricture were enrolled at the Peking University First Hospital and underwent urethroplasty using HADM. Two patients had a membranous stricture, and three had a penile stricture. All patients had previous surgical interventions. The repair technique was determined during the surgery. HADM was used as a tubularized substitution in three patients, and an onlay patch augmentation was

performed in the other two patients. Each patient had an 18F catheter left in place for 6 months. Uroflowmetry was performed routinely after surgery, and the outcome was considered as a failure when the maximal flow rate was less than 14 mL/s.

Results: The mean urinary flow rate before surgery was 0 mL/s due to the severe stricture obstruction preoperatively. Postoperatively, the median maximal flow rate was 21.5 mL/s (n=5). The median maximal flow rate was 13.85 mL/s (n=4) after 5 years. In fact, two patients had to undergo another or a third surgery to help urination during the follow-up, and only one patient could retain a maximal flow rate of more than 14 mL/s 5 years after the surgery.

Conclusions: The use of HADM to repair the urethral stricture in the patients was not satisfactory probably because of the poor urethra bed quality.

Keywords: Heterogeneous acellular dermal matrix (HADM); tissue engineering; urethral reconstruction

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