Urol Int. 2018;101(3):313-319. doi: 10.1159/000492720. Epub 2018 Sep 7.

Impact of Thermo-Expandable Memokath Ureteral Stent on Renal Function in the Management of Ureteroileal Anastomotic Stricture.

Miernik A[1], Suarez-Ibarrola R[1], Bourdoumis A[2], Buchholz N[3].

Author information

1 Department of Urology, University of Freiburg Medical Center, Faculty of Medicine, Freiburg, Germany.
2 Department of Urology, Acute Pennine Hospitals NHS Trust, Manchester, United Kingdom.
3 Urology in Emerging Countries (U-merge Ltd.), London/ UK and SVMC, Dubai Health Care City, Dubai, United Arab Emirates.

Abstract

PURPOSE: The study aimed to assess the impact of the Memokath 051 stent (MK) on glomerular filtration rate (GFR) and split renal function in the management of ureteroileal anastomotic strictures.

MATERIALS AND METHODS: We treated 6 patients in the ages of 66-77 years, 2 of whom had bilateral strictures, with a total of 8 ureteroileal strictures using the MK stent. Five patients had chronic kidney disease (CKD) prior to MK insertion. Mean time between conduit surgery and MK insertion was 28.4 months. Serum creatinine, GFR, and MAG-3 renography were determined before stent insertion and postoperatively at 3 months.

RESULTS: Postoperative complications at 3-month follow-up included migration in 2 patients, occlusion in 2 patients, and urinary tract infection in 4 patients. The mean stent indwelling time was 353.4 ± 169.3 days. Mean preoperative creatinine, GFR, right, and left split renal function were 158.3 ± 76.3 µmol/L, 43.6 ± 32.9 mL/min/1.73 m2, 52.8 ± 22.2%, and 47.1 ± 22.2%, respectively. Mean postoperative values were 168.1 ± 84 µmol/L ($p = 0.84$), 40.8 ± 28.4 mL/min/1.73 m2 ($p = 0.56$), 51.1 ± 18.3% ($p = 1$), and 48.8 ± 18.3% ($p = 1$), respectively.

CONCLUSION: MK stent is a safe and efficient minimally invasive long-term treatment option to preserve GFR in patients who develop CKD through ureteroileal anastomotic stricture. In spite of MK stent insertion and alleviation of obstruction, it was presumably inserted too late to improve renal function.