

Surgical Outcomes of Ureteroneocystostomy and Ureteroureterostomy in Treating Iatrogenic Ureteral Trauma – a Meta-Analysis.

Introduction Ureters are highly susceptible to iatrogenic injury due to their proximity to vital abdominal and pelvic organs. Ureteral traumas are rare and only account for 1-2.5% of all urogenital injuries. However, various ureteral injuries can occur during gynecologic, colorectal, and urologic operations, 75% of which are iatrogenic. Ureteral trauma is usually detected later because of its asymptomatic nature in early stages or misclassification as a general clinical condition post-surgery. In the case of delayed detection of iatrogenic ureteral injury, the timing of the operation and correction method should be decided in consideration of the location and extent of the injury along with the type of previous surgery.

Objectives The objective of this study is to compare the outcomes of ureteroureterostomy and ureteroneocystostomy in iatrogenic ureteral trauma management.

Methods We compared studies involving the treatment of iatrogenic ureteral injuries using ureteroureterostomy and ureteroneocystostomy conducted between 2012 and 2021. Retrospective studies were chosen through literature searches on PubMed and Google Scholar. Data were analyzed using packages “meta” and “metasens” in R.

Results A total of 309 patients participated in 6 studies from 2012 to 2021. 126 underwent ureteroureterostomy, and 183 underwent ureteroneocystostomy. 152 out of 183 (83%) with ureteroneocystostomy and 88 out of 126 (70%) with ureteroureterostomy resolved without any complications. Neither technique seemed to be associated with major complications. Ureteroneocystostomy was associated with fewer complications than ureteroureterostomy (RR=0.90),

Jee Hwan Kim¹, Minji Kang², Hayun Kim³, Siyoon Nam⁴, Seyeon Lee², Jina Lee⁵, Sanghyeon Chung²

¹ Chung-Ang University

² Ewha Womans University

³ Korea University

⁴ Pusan National University

⁵ Yonsei University

Correspondence to:

Jee Hwan Kim
Chung-Ang University, Seoul,
South Korea

jeehwan34@cau.ac.kr

although the result was not statistically significant (95% CI=[0.76,1.07], p-value=0.08).

Conclusion Iatrogenic ureteral trauma is a major issue in surgical procedures, and the surgical method should be chosen according to the factors outlined above. Results showed that ureteroureterostomy and ureteroneocystostomy were both efficient techniques utilized in the treatment of iatrogenic ureteral trauma, and there was no statistically significant difference in the outcome of the two techniques.