

# Ureteric bridging with a fully coated stent - a new therapy option for severed ureter

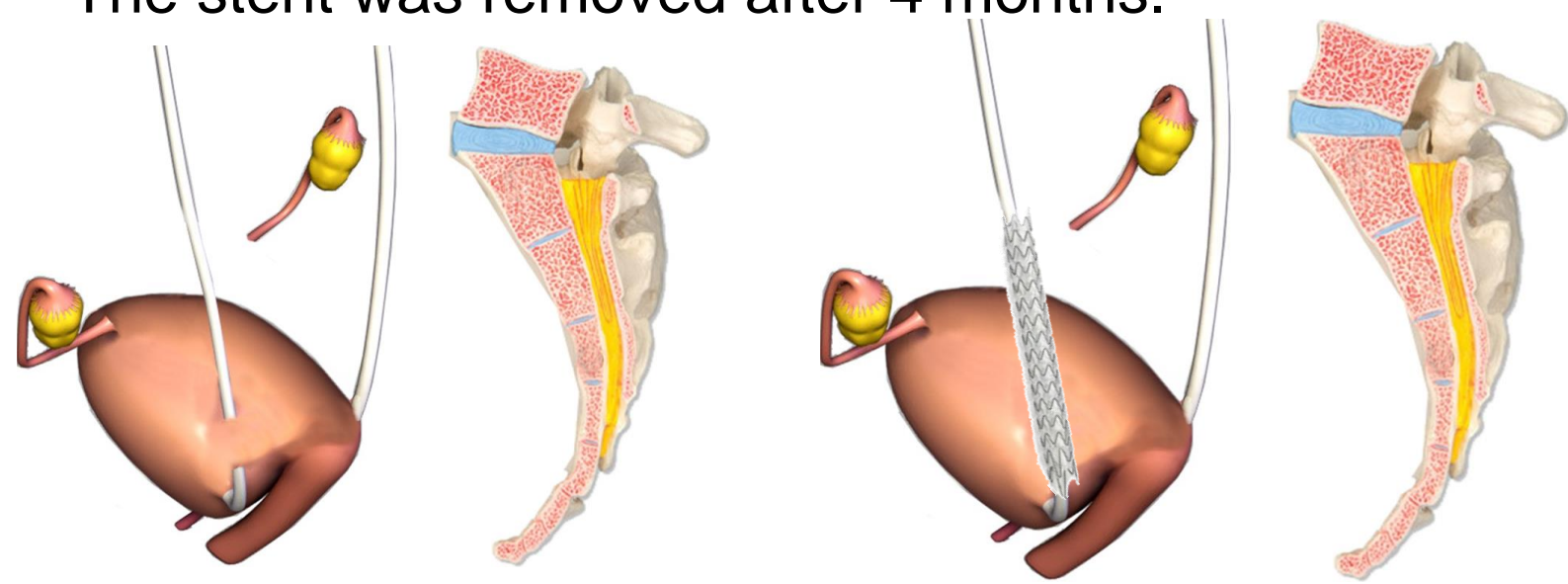
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## Introduction:

Ureteral injury is one of the most serious complications of gynecologic and colorectal surgeries. It is often associated with significant morbidity. Since 2012, we investigated in our clinic a new technique for ureter reconstruction- use of the Allium Ureteric Stent (URS) a metal self-expanding stent which is made of nitinol and covered with a biocompatible, biostable Elast-Eon polymer to make it a nonpermeable tube. These properties contribute for a healing process of the ureter lesion without any subsequent treatment. The stent is inserted minimally invasively using a cystoscope or ureterorenoscope under radiological control using the Seldinger technique. Before using a stent of course, it has to be diagnosed whether there is a complete missing ureter part which has to be fully bridged and whether a subsequent treatment is necessary

## Materials and Methods:

- Retrospective study.
- 7 patients with ureter injury were treated during 05/2016 - 12/2018 use of Allium Stent (ureter stent 120x10mm, 200x9mm, Allium). Insertion was performed 6x retrograde, 1x antegrade under radiological control.
- 2 had a severed ureter - A “rendezvous maneuver” had to be done.
- 5 cases- ureterorenoscopes was used in order to connect the severed ureter.
- 3 patients had a stent in stent technique in order to have a good urine drainage.
- Mean surgery time was 36min (21-57min).
- Average bridging distance was 1.6cm (1.1-4.8cm).
- Average inpatient stay was 2 days.
- Follow-up after 2, 4 and 12 weeks included physical and ultrasound examination.
- The stent was removed after 4 months.

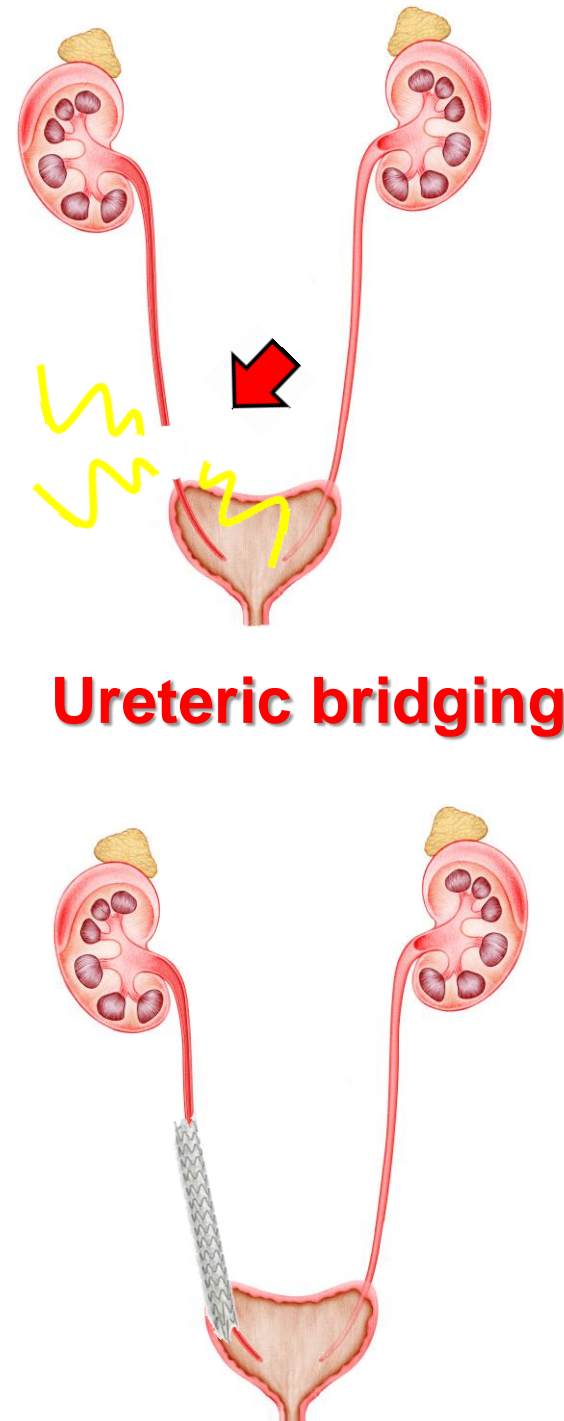


## Results:

- healing rate of 90.5%
- Stent removal was carried out in 100%
- There were no complications using URS and grasping forceps.
- No leakages, discontinuities or scarred strictures were detected in retrograde imaging and URS.
- two cases had a subsequent therapy (ovarian cancer recurrence, vascular bypass). A specially in these cases, bridging was shown to be very sufficient.
- Infection or incrustation of the stent was not detected during stentinsertion nor during follow up period.
- Patient satisfaction was very high.

## Conclusion:

Using a fully coated polymeric stent is a good option for treating a damaged ureter. Due to the stent properties wound healing was significantly improved and complete healing was achieved without strictures and subsequent interventions in 90.5%. Long-term studies has to be done.



Bridging the gap by using the allium stent without following treatment

