Docket #: S24-119

UreStent: An Innovative Ureteral Stent to Reduce Stent Related Complications

Stanford researchers have developed an innovative ureteral stent (UreStent) which is designed to reduce stent-related complications by incorporating a distal tip with collapsible tube and a flexible retention cone to prevent urine reflux and bladder irritation, ensuring optimal comfort and functionality in post-ureteroscopy procedures.

Ureteral stents are a standard tool in urological procedures, primarily used to ensure urine drainage from the kidney to the bladder after interventions like ureteroscopy. While effective, the current stent designs frequently lead to stent-related complications in over 80% of patients, causing symptoms such as pain, bladder spasms, and urine reflux. These issues often result in unplanned clinical visits, contributing to patient discomfort and healthcare costs. The market has yet to see a ureteral stent that effectively addresses these root causes.

To address this need, Stanford researchers have developed UreStent - an innovative ureteral stent designed to tackle stent-related complications (SRCs). UreStent is engineered to provide all the benefits of a standard ureteral stent, such as ensuring drainage and preventing ureteral obstruction, while minimizing SRCs by prioritizing patient comfort and clinical efficacy. Key design features include a flexible polymer conduit for adaptable placement, and a distal tip with collapsible tube and a flexible retention cone to prevent reflux, reducing kidney irritation and bladder spasms. This design rethinks stent functionality with an emphasis on addressing SRCs, making UreStent a promising advancement in urological care by reducing clinical visits and improving outcomes.

Stage of Development:
Research - in vitro

Applications

- Post-ureteroscopy procedures
- Urological interventions
- Short-term stenting needs
- Research and clinical trials.
- Potential for licensing and partnerships

Advantages

- Reduced stent-related complications
- Innovative design features
- Reduces bladder spasms and overall irritation
- Designed with patient's comfort and well-being in mind
- Significant reduction in the need for unplanned medical visits

Patents

- Published Application: WO2026006801

Innovators

- Manikantam Gaddam
- Kunj Raju Sheth

Licensing Contact

Seth Rodgers

Licensing Manager, Life Sciences

Email