

Call for Abstracts

for

15th Annual Lorne D.Sullivan Lectureship and Research Day

Date: Tuesday, June 15, 2021
Time: 8:30 AM – 12:00 PM (PDT)
Location: Zoom (Online)

The UBC Department of Urologic Sciences will be holding the 15th Annual Lorne D. Sullivan Lectureship and Research Day on Tuesday, June 15, 2021, 8:30 AM – 12:00 PM (PDT). In light of the ongoing situation and in continued support of efforts to reduce the spread of COVID-19, our Research Day will be presented virtually via Zoom, in an abbreviated format.

We are requesting submission of abstracts from basic, translational or clinical projects that are complete or nearly complete. We will have only oral presentations this year, no posters.

Abstract Instructions:

- Single-spaced using **Cambria 12-point size**.
- The title should be in block letters and bolded.
- Immediately after the title, the authors name and affiliations should appear. When listing authors from different affiliations, use reference numbers to organize.
- Underline the presenter's name.
- Indent all paragraphs.
- When using abbreviations, spell out in full the first mention, followed by the abbreviation in parentheses.
- Abstract should be less than 300 words.

Please submit your abstract by **April 30, 2021** to urology.research@ubc.ca

(Please see attached abstract example for reference.)

INDWELLING URETERAL STENT PLACEMENT INDUCES APERISTALSIS, INJURY AND FIBROSIS

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Introduction and Objectives:

Ureteral stenting can cause symptoms including pain and discomfort in more than 80% of patients. Previous work suggested a role for the Gli family proteins and erythropoietin in regulating proper function of ureteral smooth muscle. We sought to investigate the effects of cellular signaling by Gli proteins and erythropoietin on stented porcine ureters.

Methods:

Pigs were stented for set time periods. They were evaluated for extent and timing of hydronephrosis, ureteral dilation, and rate of peristalsis. Tissues were examined for evidence of urinary system inflammation by a blinded pathologist. RNA and protein level experiments were used to evaluate expression of potential biomarkers. Ureteral contractile force was evaluated.

Results:

Stent placement triggers massive ureteral dilation, aperistalsis and moderate hydronephrosis within 48 hours of placement. Gli1 expression was increased in stented ureters as compared to contralateral unstented ureters. Similarly, increased expression of markers of kidney injury and fibrosis was noted. Erythropoietin did not improve peristalsis or contraction force but was noted to decrease non-purposeful spasming in stented ureters. Tamsulosin administration affects force of contraction but not rate of peristalsis in stented ureters.

Conclusions:

Regulation of peristalsis in stented ureters is multifactorial. Tamsulosin increases contractile force, consistent with previous theories on alpha blocker function in ureteral obstruction. Prophylactic erythropoietin may regulate ureteral stabilization in stretch induced spasming following stent placement. Stent placement causes kidney injury, potentially leading to Gli family activation and efforts at repair. Continuing work will elucidate the role of these agents in coordinating ureteral contractions and combatting stent-induced injury.