

LBA5

THE USE OF A NOVEL THERMOSENSITIVE POLYMER (BACKSTOP™) TO PREVENT PROXIMAL URETERIC STONE RETROPULSION DURING INTRACORPOREAL LITHOTRIPSY: A PROSPECTIVE RANDOMIZED CONTROLLED CLINICAL TRIAL

*Abhay Rane**, Redhill, United Kingdom; *Pradeep Rao*, Mumbai, India; *Subodh Shivde*, Pune, India; *Anil Bradoo*, Mumbai, India; *Mostafa Elhilali*, Maurice Anidjar, Montreal, QCCanada; *Kenneth Pace*, John R. D'A Honey, Toronto, ON, Canada

INTRODUCTION AND OBJECTIVE: We present a randomized controlled prospective study using BackStop™ (Pluromed Inc, Woburn, MA), a novel reverse thermosensitive, water soluble polymer that is injected above the stone as a low viscosity gel, and which rapidly transitions to a high viscosity gel at body temperature, thereby occluding the ureter and preventing retrograde stone migration during intracorporeal lithotripsy. After fragmentation is completed and concretions extracted, conventional irrigation with saline dissolves the polymer, which is then flushed out.

METHODS: A total of sixty-eight eligible subjects have been consented and randomly assigned to either the experimental group (BackStop™) or the control group (no anti-retropulsion device). All subjects were indicated for ureteroscopic lithotripsy to treat single, radiopaque stones located in the proximal ureter. Primary endpoints include a determination of the effectiveness of BackStop™ in preventing retrograde stone migration during intracorporeal lithotripsy and an assessment of its "removal" via dissolution. The volume used, stone free rates and necessity of secondary procedures, if any, were also documented.

RESULTS: The rate of stone retropulsion in the BackStop group was 8.8% (3/34) compared to 52.9% (18/34) in the control group (p=.0002).

CONCLUSIONS: BackStop safely and significantly reduces the incidence of retropulsion of ureteral stones during intracorporeal lithotripsy.

A. Rane, Pluromed S; **P. Rao**, Pluromed S; **S. Shivde**, Pluromed S; **A. Bradoo**, Pluromed S; **M. Elhilali**, Pluromed S; **M. Anidjar**, Pluromed S; **K. Pace**, Pluromed S; **J. Honey**, Pluromed S.