



AB061. SOH22ABS028. A prospective multi-institutional study using the transurethral catheterisation safety valve (TUCSV[®]) for the prevention of catheter balloon inflation injury of the urethra

Olivia Baird, Eabhann O'Connor, Stefanie Croghan, John Fallon, Peter Loughman, Jibraan Esoof, James Ryan, Robert Keenan, Subhasis Giri

Department of Surgery, University Hospital Limerick, Limerick, Ireland

Background: Catheter balloon injuries (CBI) of the urethra are avoidable iatrogenic injuries which occur in just over 1% of hospitalised male inpatients. The transurethral catheterisation safety valve (TUCSV[®]) is a novel safety device designed to prevent CBIs. The aim of this multi-institutional clinical study was to prospectively assess the TUCSV's ability to prevent urethral CBI over a 3-month study period.

Methods: The incidence of CBI was recorded in 2 Irish hospital groups over a 3-month period. Following this, the TUCSV was introduced for urinary catheterisation in a variety of hospital settings in the primary institution of the same 2 Irish hospital groups over a 3-month study period (April–July 2021). Data were recorded using a 7-item data sticker with a scannable QR code. 'Venting' through the safety valve during catheterisation was indicative of a urethral injury prevented. Any CBIs referred to the Urology team on call were recorded.

Results: In total, 699 urethral catheterisations were carried out using the TUCSV, with 12 (1.7%) episodes of TUCSV venting recorded. There were no urethral injuries in

these patients. In the same period, 13 urethral CBIs were recorded where the TUCSV was not utilised. This suggests that the true incidence of CBI is substantially greater than that based on cases referred to Urology only. The injury rate was 5.9/1,000 catheterisations or 10.4/1,000 male catheterisations.

Conclusions: The TUCSV has the potential to eliminate CBI of the urethra if widely adopted. It represents a simple, effective and innovative solution to this recurring problem.

Keywords: Catheter balloon injuries (CBI); catheter safety valve; iatrogenic injury; prevention; urethral catheter

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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