PE67 The feasibility and safety of early mitomycin C bladder instillation post robotic nephroureterectomy

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Introduction & Objectives: Intravesical recurrence post radical nephroureterectomy is a common event. The evidence for the use of mitomycin C (MMC) in the immediate post-operative period in patients undergoing transurethral resection of bladder tumours is strong, but less so in patients undergoing radical nephroureterectomy. The gold standard treatment of excision of a bladder cuff and therefore the concern over MMC extravasation with the well-recognised potential serious adverse events has made its use and consequent study of benefits limited. There is however, some evidence that MMC instillation post nephroureterectomy does reduce intravesical recurrence. Robotic nephroureterectomy (RANU) allows for a precise distal ureteric dissection, bladder cuff excision and watertight bladder closure. Our objectives were to assess feasibility and safety of early single dose MMC bladder instillation post RANU.

Materials & Methods: We performed a retrospective review of all patients undergoing RANU over a year period between 2017-2018 at a large tertiary referral centre. All patients underwent a bladder cuff excision with a 2-layer closure and subsequent intra-operative bladder leak test with 200-300mls saline instilled to ensure a watertight closure. Patient demographics, the timing of MMC instillation and adverse events (surgical and potentially MMC-related) were assessed according to the Clavien-Dindo classification.

Results: Forty-seven patients underwent a RANU over the one-year period. The median age was 71 years (range 36-93). Thirty were male with the remaining 17 female. Thirty-nine received MMC bladder instillation in the immediate post-operative period. The median day of instillation was day 2 (range 1-8). The median day of discharge of patients receiving MMC was day 2 (range 2-6). Two patients developed a post-operative ileus which resolved with conservative management. No adverse events related to MCC instillation were noted both during the inpatient stay and at first follow up clinic 2-3 weeks post-operatively. Of the nine patients who did not receive MMC, 5 had an incomplete distal ureteric dissection due to T4 disease or significant adhesions. Three had difficult bladder cuff closures deemed not suitable for early MMC instillation and 1 underwent a benign nephroureterectomy for a refluxing system causing infections.

Conclusions: The use of intravesical MMC instillation given in the immediate post-operative period appears feasible and safe in patients undergoing RANU. The use of MMC did not seem to impact on length of hospital stay with a low median stay of 2 days. The potential reduction in intravesical recurrence in patients receiving MMC in the immediate post-operative period remains to be assessed.