Mucosal Exclusion stitch - A simple and effective solution to mitigate the risk of urinary stones in stapled ileal conduit

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Introduction & Objectives: Robotic assisted Radical cystectomy with intracorporeal ileal conduit (iRARC) is becoming the standard of care for high risk and muscle invasive bladder cancer. The use of Echelon GIA end staplers has enabled efficient and safe formation of an intra-corporeal ileal conduit. However, the metallic staple line of the conduit can act as a nidus and thus increase the risk of stone formation within the conduit. The aim of the study was to explore the feasibility, safety and outcome of the mucosal exclusion stitch at the staple line.

Materials & Methods: A prospective observational study of patients undergoing iRARC by modified USC technique between June 2016 to June 2020 at a tertiary centre in UK was carried out. During the intracorporeal conduit formation, the bowel loop was selected and proximal end stapled. The staple line was excluded using 3.0 vicryl continuous suture from anti mesenteric to the mesenteric border and back. All the baseline demographic and peri-operative complication were noted. The patients were followed up for minimum period of 1 year.

Results: A total of 82 patients underwent iRARC, of which 74% (61) were males. The mean age of 61 (43-85). The average time to perform the mucosal exclusion stitch was about 5 minutes. Clavien Dando III and above complications were noted in 6.1% patients and 3.7% required blood transfusion. The mean length of hospital stay was 8 days. None of the patients had urinary stones in the conduit during their follow up period.

Conclusions: Mucosal exclusion stitch on the proximal end of the conduit is a simple, feasible, safe and cost-effective technique which mitigates the risk of stone formation in stapled ileal conduits.