

#801 Urological Outcomes and Adverse Events Following Total Pelvic Exenteration for Locally Advanced and Recurrent Rectal Cancer: A Single Centre Retrospective Study

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Hypothesis / aims of study

- Colorectal cancer (CRC) is the third most diagnosed cancer worldwide in both males and females (1). Total pelvic exenteration (TPE) is the only curative option for patients with locally advanced (LARC) or recurrent rectal cancer (RRC).
- Although TPE involves cystectomy and subsequent urinary diversion, documentation of urological outcomes is largely limited.
- The aim of this study is to assess urological outcomes following TPE for locally advanced or recurrent rectal cancer, with a focus on urological complications and adverse events and whether these were affected by disease status or radiation status.

Study design, materials and methods

- Single-centre retrospective study of all patients with locally advanced or recurrent rectal cancer who underwent TPE between January 2017 and December 2022 at a tertiary centre.
- Electronic patient records were evaluated to extract demographic, preoperative and intraoperative data along with complications, readmissions, return to theatre and mortality.
- Postoperative outcomes were analysed using two-tailed t-tests, Mann-Whitney U tests and chi-squared tests. Urological complications were analysed using simple logistic regression. A threshold of $p < 0.05$ was considered statistically significant.

Results

- 130 patients (median age 63, range 29-84) underwent TPE, 113 males and 17 females. 98 (75.4%) of which were for LARC and 32 (24.6%) for RRC. 83 patients (63.8%) received neoadjuvant chemoradiotherapy.
- The overall urological complication rate was 53.8%. A total of 24 patients (18.5%) had at least one major complication of Clavien-Dindo III/IV related to the urinary system.
- Acute kidney injury (AKI) accounted for most urological complications, occurring in 38 (29.2%) patients followed by urinary tract infection (UTI) in 34 (26.2%). Ureteroenteric strictures were seen in 9 (6.92%). Fourteen (10.8%) had urine leak.
- There was no association between the overall incidence of urological complications and radiation status (OR 0.86 [0.40 – 1.83], $p = 0.701$) and no statistically significant difference between patients with LARC and RRC (OR 1.91 [0.85 – 4.50], $p = 0.127$).

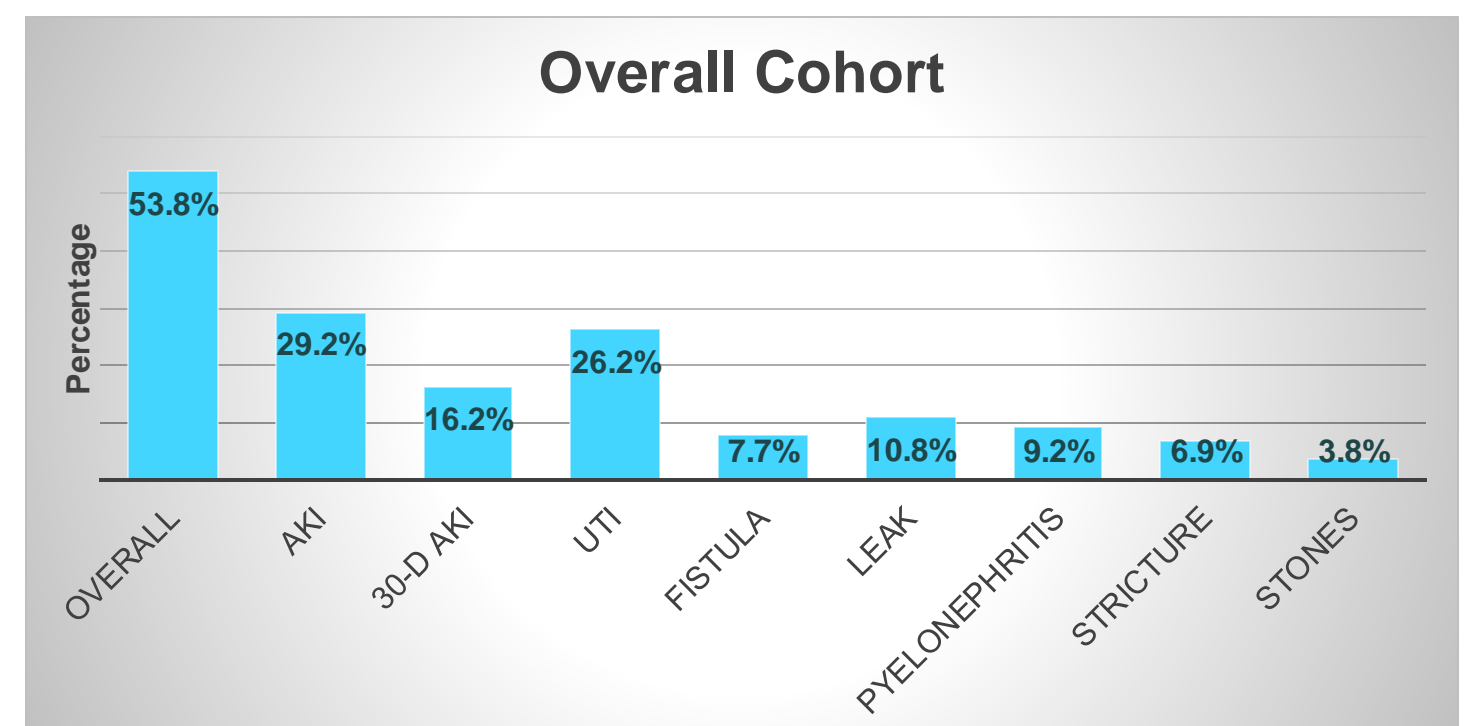


Figure 1 Incidence of urological complications for overall cohort

LARC vs RRC

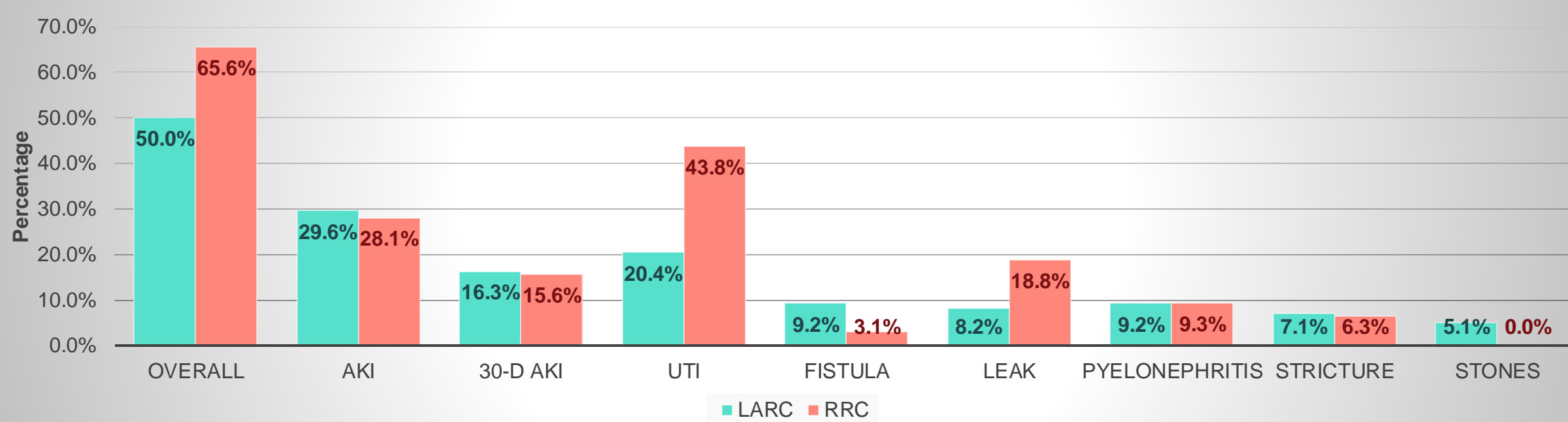


Figure 2 Incidence of urological complications according to locally advanced vs recurrent colorectal cancer

RT vs No RT

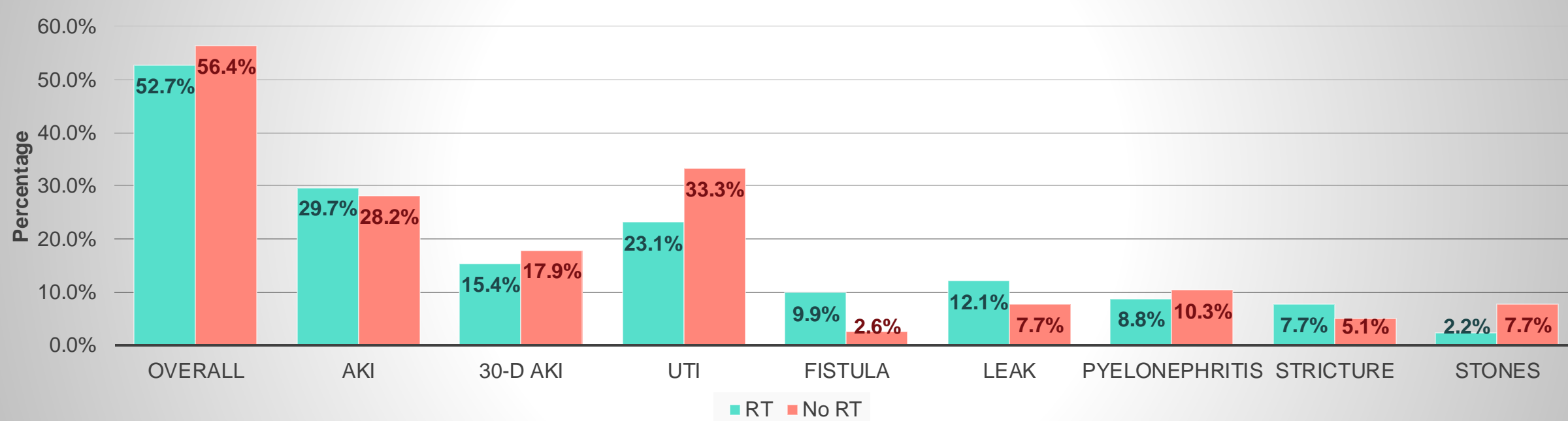


Figure 3 Incidence of urological complications according to radiation status

Interpretation of results

- The rate of urological complications is similar between patients with LARC and RRC and between patients with and without neoadjuvant radiotherapy and is in keeping with our previous study (2).
- This may be due to high dissection of the ureters outside the radiation field and use of small bowel segments not obviously effected by radiotherapy for the ileal conduit formation.
- Whilst such surgical technique is more time-consuming and technically challenging, it appears to give good outcomes.

Conclusions

- Urological complications are common following TPE. There was no statistically significant difference in the rate of urological complications between patients with LARC and RRC, and between patients with and without radiotherapy.
- AKI is the most common urological complication post-TPE.
- Further multi-centre prospective studies are required to confirm these findings.

References

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- Khan O, Patsouras D, Ravindraanandan M, Abrar MM, Schizas A, George M, et al. Total Pelvic Exenteration for Locally Advanced and Recurrent Rectal Cancer: Urological Outcomes and Adverse Events. Eur Urol Focus. 2021 May 1;7(3):638–43.