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Analysis of length of ureter in adult patients who underwent computed tomography urogram in teaching hospital Jaffna.

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Introduction Ureteral stenting has been a fundamental part of various urological procedures. The use of an inappropriately dimensioned ureteral stent is associated with clear side-effect profile and report on reduced quality of life. Selecting a ureteral stent of optimal length is important for decreasing the incidence of stent symptoms and its complications.

Objective To identify the average length of ureter in adult Jaffna population and its variability with age and gender.

Methods It is an institutional based descriptive cross sectional study on analysis of average length of ureter among adults who admitted to Teaching hospital Jaffna and underwent CT urogram. A total of 69 patients who has undergone CT urogram consecutively in last 4 months from April to July 2021, including 48 men (69.6%) and 21 women (30.4%) were enrolled in this study. Fifty seven (49.6%) right ureters and fifty eight (50.4%) left ureters were selected. Ureters with pathology were excluded in this study. The actual length and linear length were measured using the Radiant DICOM viewer 3.2.3.

Results The actual average length of right ureter was 23.03 (± 3.15) cm and left was 23.48 (± 3.17) cm. The actual average length of right ureter in male was 23.03 (± 2.85) cm and left was 23.64 (± 3.16) cm. The actual average length of right ureter in female was 23.03 (± 3.82) cm and left was 22.98 (± 3.26) cm. Multiple linear regression showed that there is a no linear relationship between the ureteral length and age or sex.

Conclusion The average actual length of ureter of Jaffna adult population is $23.03 \ (\pm 3.15)$ cm on the right side and $23.48 \ (\pm 3.17)$ cm on the left. The median ureter length is $23.26 \ (\pm 3.15)$ cm. So, it is prudent to use 24cm ureteral stent to Sri Lankan population.