

Prevalence of common risk factors and their influence on recurrence among patients with urolithiasis at Teaching Hospital Jaffna

Piriyanthu T¹, Sobika S¹, Kumar R², Ambalavanar DC³, Coonghe PAD²

¹*Faculty of Medicine, University of Jaffna*

²*Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna*

³*Department of Surgery, Faculty of Medicine, University of Jaffna*

Background: Urolithiasis or calculus formation in the urinary collecting system affects 1 to 15 percent of the population globally. It is a multi-factorial disorder influenced by socio-demographic factors (age and sex, educational level, occupation, economic status and living environment), lifestyle factors (diet, smoking habit, alcohol consumption and fluid intake), and the presence of co-morbidities (obesity, diabetes mellitus, hypertension, dyslipidaemia and chronic urinary tract infection) and drug and family history. This study aimed to determine the prevalence of common risk factors and assess their influence on recurrence among patients with urolithiasis at Teaching Hospital Jaffna.

Methodology: An institution-based cross-sectional study was carried out among patients admitted with urolithiasis between November 2017 and January 2018 to the surgical wards of Teaching Hospital Jaffna. Consecutive sampling was used. Data were collected using an interviewer-administered questionnaire, data extraction form and standard anthropometric measurements. Urine colour was assessed using a dehydration chart. Data were analyzed using SPSS (v.23). Percentages and proportions were used to describe risk factors and the influence of risk factors on recurrence was assessed using the Chi Square test.

Results: 116 patients with urolithiasis participated in the study. Of the total sample, 69.8% were in the 20-60 years age group with a male predominance (72.4%). Smokers and alcohol consumers accounted for 29.3% and 25.8% patients with urolithiasis. Most participants (56%) reported having a fluid intake of 1-2L per day with 4.3% having <1L per day. Over half (53.4%) reported passing pale yellow coloured urine. With respect to co-morbidities, 19.8% had diabetes mellitus, 18.1% hypertension, 17.2% dyslipidaemia and 19.8% had a positive family history of urolithiasis. Recurrence was found to be significantly associated with smoking ($p \leq 0.001$), fluid intake ($p \leq 0.02$) and colour of urine ($p \leq 0.019$).

Conclusion: Urolithiasis was most common among men in the productive age group. A large proportion of urolithiasis patients reported a relatively low fluid intake. Recurrence was significantly associated with smoking, fluid intake and colour of urine. Modifiable risk factors such as smoking habit and fluid intake may be targeted for preventive efforts in Jaffna.

Key words: Urolithiasis, risk factors, recurrence, Jaffna