

Urinary calculi in Northern Province, Sri Lanka;

A descriptive cross-sectional study conducted at Teaching Hospital Jaffna among the patients underwent surgical interventions for urinary calculi

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Abstract – Urinary calculi may affect the renal function and cause permanent damage to the kidney, if it is not treated. This study was carried out to find the distribution of urinary calculi in Northern Province patients who underwent surgical interventions for urinary calculi at Genitourinary surgical unit, Teaching Hospital Jaffna. It is a descriptive cross sectional study carried out from October 2016 to November 2017. The demographic data including age, gender, place of residence during the last ten years, and recurrence were obtained from the clinical notes and recorded in data extraction sheets. Of the 115 patients selected higher percentage of urinary calculi was reported in males (n=76, 66.1%) than in females (n=39, 33.9%) with the ratio of 1.9:1. The age of patients having stones ranged from 07 to 85 years with the mean age of 56.9 (±16.2) years. In this study, 60 males (79%) and 32 females (82%) were in the age range of 51-70 years. Highest number of patients was from Jaffna District (n=73, 63.5%) and lowest number was from Mannar District (n=5, 4.3%). This study showed that 28.7% (n=33) had past history of urinary calculi surgical recurrence. Recurrence also common in males (69.6%) than females (39.2%). From this study it can be concluded that, the urinary calculi were more common in males than in females from all five Districts of Northern Province; males had more recurrence of urinary calculi than females and urinary calculi were more common in productive age group. Systematic survey should be carried out to confirm this problem in Northern Province, Sri Lanka.

Key words – Northern Province, Sri Lanka, Urinary calculi

I. INTRODUCTION

Urolithiasis is one of the common and most painful medical problem encountered all over the world [1]. Urinary calculi are polycrystalline aggregates composed of varying amounts of crystalline and a small amount of organic matrix. It can affect the renal function and lead to permanent damage of the kidney, if it is not treated [1].

About 2 to 5% of Asians develop urinary calculi in their lifetime. It is estimated that approximately 2% of the population experiences urinary stone disease at sometime in their life with male-female ratio of 2:1. The peak incidence is observed in 2nd to 3rd decades of life.

Prevalence of urinary calculi in Sri Lanka is mainly associated with certain dietary habits and environmental geochemical factors, which greatly influence the aetiology of urinary calculi [1]. It has been reported that trend in the admission of patients with kidney stones to Teaching Hospital, Jaffna is increasing [2]. The aim of this study was to find the distribution of the urinary calculi in Northern Province patients who underwent surgical intervention for urinary calculi at Genitourinary surgical unit, Teaching Hospital Jaffna.

II. METHODOLOGY

It was a descriptive cross sectional study carried out from October 2016 to November 2017. A total of 115 patients [3] from Northern Province who underwent surgical intervention for urinary calculi at Genitourinary surgical unit, Teaching Hospital, Jaffna were recruited for this study. A written, informed consent was obtained prior to their recruitment. The demographic data including age, gender, place of residence during the last ten years and surgical recurrence were obtained from the clinical notes and recorded in data extraction sheets.

Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna. The collected data were analyzed using SPSS version 20.

III. RESULTS

Demographic data

Among the patients those who were affected with urinary calculi, highest number was from Jaffna District (n=73, 63.5%) and lowest number of patients were from Mannar District (n=5, 4.3%) (See Table 1).

Table 1

Distribution of the urinary calculi in northern province patients who underwent surgical intervention for urinary calculi at genitourinary surgical unit, teaching hospital jaffna.

District	Total		Male		Female	
	No.	%	No	%	No	%
Jaffna	73	63.5	47	64.4	26	35.6
Kilinochchi	11	9.6	06	54.5	05	45.5
Mullaitivu	16	13.9	12	75.0	04	25.0
Vavuniya	10	8.7	08	80.0	02	20.0
Mannar	05	4.3	04	80.0	01	20.0
Total	115	100.0	76	66.0	39	34.0

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