

A study on renal stone about factors influencing its formation and clinical scenario among adults aged 21-60 years in saurashtra region

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Introduction

There is no single previous study of renal stone in the Saurashtra region had been done, in spite of claims that a "stone belt" exists in this region. Due to lack of epidemiological data a startling gap remains between the services offered and the benefits incurred. Considering that this problem which ails most parts of the Saurashtra region is both correctable and preventable and has a high social impact due to its recurrent nature, an investigative study in this matter will do much to sort it out. This report is the first description of the epidemiology of renal stones in a Saurashtra region.

Methods

Through this population based descriptive case-series study, a total of 100 patients with a radiologically diagnosed 'case' of renal stone were enrolled in the study and interviewed through proforma approved by institutional ethical committee to study risk factors, clinical scenario, and urinary findings. Urine samples were collected from all the patients who participated in

the study and analyzed for the presence of crystals, red blood cells, pus cells as well as urine pH. Data were analyzed with help of Epi Info™ 7 (CDC Atlanta).

Results

Kidney stone prevalence is higher in men (73%) in compare to females and common with age group 21-35 years. Recurrent flank pain (92%) gross hematuria (67%) and urinary tract infection (52%) were found most commonly in them. Family history ($p=0.004$), Improper water drinking habit ($p=0.002$), lack of knowledge regarding disease ($p=0.005$), lack of diet modification ($p=0.0001$) according to stone type and stone analysis were found probable causes for the recurrence of stone in the patients. Urinary crystals found in 60% of the patient and most common was calcium oxalate (80%) followed by calcium phosphate (12%) and uric acid (8%).

Colclusion

Combination of proper awareness and appropriate preventive measures are necessary for the better treatment of renal stone and should be tailored for individual patient. In addition, individual patients should be counseled and diagnosed for the probable causes of stone as for stone prevention is better than cure.