



CODEN [USA]: IAJPBB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF  
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.2573093>Available online at: <http://www.iajps.com>

Research Article

**SPECTRUM OF RENAL CALCULI AT TERTIARY CARE  
HOSPITAL**<sup>1</sup> Dr. Tufail Ahmed Baloch, <sup>2</sup> Dr. Tekchand Maheshwari, <sup>3</sup> Dr. Arshad Hussain Abro,  
<sup>4</sup> Hamid Nawaz Ali Memon, <sup>4</sup> Dr. Samar Raza and <sup>4</sup> Dr. Ali Raza Shaikh<sup>1</sup>Consultant Surgeon & Medical Superintendent Peoples Medical College Hospital<sup>2</sup> Associate Professor Department of Surgery Isra University Hyderabad<sup>3</sup>Liaquat University of Medical and Health Sciences (LUMHS) Jamshoro<sup>4</sup>Liaquat University Hospital Hyderabad / Jamshoro**Abstract:****OBJECTIVE:** To determine the spectrum of renal calculi at tertiary care hospital.**PATIENTS AND METHODS:** The material for clinical investigation of renal lithiasis was chosen from the cases admitted to careful and Urological wards of tertiary consideration medical clinic. The determination of cases depended on clinical indications and radiological discoveries. The cases contemplated were of all the age gatherings and both sexual orientations while the frequency / percentages (%) and means  $\pm$ SD computed for study variables.**RESULTS:** During six months study period total fifty patients with renal stone were studied. the frequency for male and female population was 30 (60%) and 20 (40%) with mean  $\pm$  SD for age of male and female individuals was  $52.65 \pm 7.86$  and  $50.85 \pm 7.53$  respectively. regarding gender male 30 (60%) and female 20 (40%), site of pain both loin 12 (24%), right loin 28 (56%), left loin 10 (20%), diagnosis ultrasound 18 (36%), plain x-ray kub 16 (32%), IVU 16 (32%), stone types calcium phosphate 10 (20%), triple phosphate 04 (8.0%), calcium oxalate 28 (56%), uric acid 08 (16%), treatment pyelolithotomy 32 (64%), extended pyelolithotomy 03 (6.0%), nephrolithotomy 02 (4.0%), pcnl 08 (16%), eswl 03 (6.0%) and nephrectomy 02 (4.0%).**CONCLUSION:** Kidney stone is a typical clinical issue looked by clinicians. Restorative management ought to be utilized prudently in all patients with kidney stones, with proper individualization.**KEYWORDS:** Stone, Kidney and Renal.**Corresponding author:****\* Dr. Tufail Ahmed Baloch,**Email: [zulfikar229@hotmail.com](mailto:zulfikar229@hotmail.com)

QR code



Please cite this article in press Tufail Ahmed Baloch et al., *Spectrum of Renal Calculi at Tertiary Care Hospital.*,  
*Indo Am. J. P. Sci.* 2018; 05(11).

**INTRODUCTION:**

Humanities history gives proof that urinary calculi existed up to 7000 years prior and maybe more. The acknowledgments of the distinctive assortment of stones likewise brought about more varieties of medicinal treatment the majority of which fizzled [1, 2]. Amid the most recent decade anyway many real advances have significantly enhanced our comprehension of the reason for stone ailments [3]. In spite of the fact that not all calculi can be restored, patients who create one of the real sorts of urinary calculi currently have in any event half odds of fix and control with therapeutic treatment alone [4]. Medical procedure keeps on being as one part of treatment of urinary calculi, however it is currently just a single step in the complete therapeutic plan for patients with urinary lithiasis. Urinary stone infection has confused the doctors for a long time [5]. The confusion happens in two structures; endemic bladder stone which happens in young men in the creating rural nations of the world and upper urinary tract stone illness which is winding up progressively increasingly pervasive especially in men among the more rich countries [6]. There are much literary works on urinary lithiasis that depicts crystalization process in urine and the comprehension of urinary stone sickness [7] So it is smarter to audit the standards of crystalization in organic frameworks as they relate to urinary framework [8]. Indeed, even today inspite of sophisticated research techniques and extended comprehension of sickness process, urinary calculi are serious issues [9]. No age gather is saved and calculi can be found in kids [10] By the by the prime age gather in which calculi happens is somewhere in the range of 20 and 50 years of age 40. Renal calculi might be singular or different and may either stay in the pelvis of the kidney or go down the ureter [11]. A calculous which stays in the kidneys may develop to an expansive size and in the long run structure a cast of the whole calyceal and pelvic gathering frameworks [12]. The purported stag-horn analytics which thusly may harm the renal parenchyma or discourage the stream of urine bringing about hydronephrosis or pyonephrosis.

**PATIENTS AND METHODS:**

The material for clinical investigation of renal lithiasis was chosen from the cases admitted to careful and Urological wards of tertiary consideration medical clinic. The determination of cases depended on clinical indications and radiological discoveries. The cases contemplated were of all the age gatherings and both sexual orientation. The quantity of cases considered isn't so large as to reach unequivocal inferences. In any case, earnest endeavor has been made towards it. The patients were first observed at outpatient divisions. A nitty gritty history, physical examinations, pee examination and plain x-beam (KUB-area) was done, before the patient was admitted to the emergency clinic. A case history was recorded in detail according to the proforma and any notable component and outline, of the cases were recorded. General inquiries with respect to the patients propensities (craving, rest and entrail) were enquired. A note was recorded with respect to the past history of urolithiasis delayed disease past activities or any instrumentation, urinary contamination, colic and treatment. General physical examination was done at that point nitty gritty fundamental examinations were done and the signs watched were recorded in proforma case sheets, with due significance to genitourinary framework. The accompanying important examinations were done after an exhaustive clinical examination of the patient pee, blood total picture, and plain X-ray KUB locale, ultrasound mid-region and I.V.U. in the patients were finished. The patients were submitted for medical procedure under general anesthesia and the stones evacuated were sent for biochemical investigation.

**RESULTS:**

During one year study period total fifty patients with renal stone were studied. The frequency for male and female population was 30 (60%) and 20 (40%) with mean  $\pm$  SD for age of male and female individuals was  $52.65 \pm 7.86$  and  $50.85 \pm 7.53$  respectively. The demographical and clinical profile of study population is presented in Table 1.

**TABLE 1: THE DEMOGRAPHICAL AND CLINICAL PROFILE OF STUDY POPULATION**

Parameter	Frequency (N=50)	Percentage (%)
<b>AGE (yrs)</b>		
20-29	05	10
30-39	08	16
40-49	15	30
50-59	10	20
60-69	08	16
70+	04	8.0
<b>GENDER</b>		
Male	30	60
Female	20	40
<b>SITE OF Pain</b>		
Both loin	12	24
Right loin	28	56
Left loin	10	20
<b>DIAGNOSIS</b>		
Ultrasound	18	36
Plain X-ray KUB	16	32
IVU	16	32
<b>STONE TYPES:</b>		
Calcium phosphate	10	20
Triple phosphate	04	8.0
Caclium oxalate	28	56
Uric acid	08	16
<b>TREATMENT</b>		
Pyelolithotomy	32	64
Extended pyelolithotomy	03	6.0
Nephrolithotomy	02	4.0
PCNL	08	16
ESWL	03	6.0
Nephrectomy	02	4.0

**DISCUSSION:**

In the present series 50 patients with renal calculi have been studied in detail. The highest incidence seen in the people from rural area. The incidence is common between 4<sup>th</sup> and 5<sup>th</sup> decades. Male gender predominance while no family history of urolithiasis was found in the current series. In all the fifty cases the presenting complaint was pain in the lumbar region or loin. The character of the pain was and dull aching. Patients complained vomiting in association with pain, fever with chills and rigors which is one of the signs of urinary tract infection which favours stone formation. There was frank haematuria in five patients which is due to irritation of mucosal wall. There was renal angle tenderness in 80% of the patients. The preliminary investigation done in all the cases were urine analysis followed by plain x-ray KUB which revealed radio-opaque shadows in renal area in all the cases. IVU was very useful in determining the function of the kidney. Ultrasound was useful in knowing size, shape and number of calculus associated with hydronephrosis. There were no operative difficulties encountered which the common intervention done was pyelolithotomy, extended pyelolithotomy, nephrolithotomy, PCNL, ESWL and nephrectomy. All the patients turned up for follow up and were symptom free till their last visit while 6 patients were lost to follow up.

**CONCLUSION:**

Kidney stone is a typical clinical issue looked by clinicians. Restorative management ought to be utilized prudently in all patients with kidney stones, with proper individualization.

**REFERENCES:**

1. Johnson CM, Wilson DM, O'Fallon WM, Malek RS, Kurland LT. Renal stone epidemiology: a 25-year study in Rochester, Minnesota. *Kidney international*. 1979 Nov 1;16(5):624-31.
2. Coward RJ, Peters CJ, Duffy PG, Corry D, Kellett MJ, Choong S. et al Epidemiology of paediatric renal stone disease in the UK. *Archives of disease in childhood*. 2003 Nov 1;88(11):962-5.
3. Bihl G, Meyers A. Recurrent renal stone disease-advances in pathogenesis and clinical management. *The Lancet*. 2001 Aug 25;358(9282):651-6.
4. Ljunghall S, Danielson BG. A prospective study of renal stone recurrences. *British journal of urology*. 1984 Apr;56(2):122-4.
5. Lieske JC, De La Vega LP, Slezak JM, Bergstralh EJ, Leibson CL, Ho KL, et al. Renal stone epidemiology in Rochester, Minnesota: an update. *Kidney international*. 2006 Feb 2;69(4):760-4.
6. Torres VE, Wilson DM, Hattery RR, Segura JW. Renal stone disease in autosomal dominant polycystic kidney disease. *American Journal of Kidney Diseases*. 1993 Oct 1;22(4):513-9.
7. Johri N, Cooper B, Robertson W, Choong S, Rickards D, Unwin R. An update and practical guide to renal stone management. *Nephron Clinical Practice*. 2010;116(3):c159-71.
8. Backman U, Danielson BG, Johansson G, Ljunghall S, Wikstrom B. Incidence and clinical importance of renal tubular defects in recurrent renal stone formers. *Nephron*. 1980;25(2):96-101.
9. Sutherland JW, Parks JH, Coe FL. Recurrence after a single renal stone in a community practice. *Mineral and electrolyte metabolism*. 1985;11(4):267-9.
10. McGeown MG. Heredity in renal stone disease. *Clinical science*. 1960;19:465-71.
11. Broadus AE, Thier SO. Metabolic basis of renal-stone disease. *New England Journal of Medicine*. 1979 Apr 12;300(15):839-45.
12. Uribarri J, Oh MS, Carroll HJ. The first kidney stone. *Annals of internal medicine*. 1989 Dec 15;111(12):1006-9.