ORIGINAL ARTICLE

Frequency of Signs and Symptoms in patients presenting at Tertiary care center with Urolithiasis

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ABSTRACT

Aim: To determine the frequency of signs & symptoms in patients coming to tertiary care center with Urolithiasis.
Methodology: One year data of patients was collected through structured performa from January 2016 to December 2016 of all ages through convenient sampling on outdoor basis.
Results: From 740 patients the range of their age was 14 years to 90 years having mean + standard deviation as 41.66+16.53 years. Male patients were 585(79.1%) and female patients were 155 (20.9%).Pattern of pain showed that stone was located at front in 330(44.6%), at groin in 280 (37.8%) patients and at ext. genitalia in 130(17.6) patients. Sudden onset of pain was found in 385 (52%) patients and gradual onset was found in 355 (48%) patients. Mild severity of pain was observed in 200(27%) patients, moderate severity was observed in 275(37.2%) patients and severe pain was observed in 265(35.8%) patients. Intermittent pain was found in 370(50%) patients, continuous pain was observed in 370(50%) patients. Oliguria was present in 95 (12.8%) patients,
Conclusion: Early detection of Urolithiasis can save patients from renal failure due to obstructive Uropathy before the kidneys become non functioning.
Keywords: Urolithiasis, renal stone, lumbar pain, hematuria, obstructive uropathy

INTRODUCTION

Urolithiasis is common in world over including Pakistan with higher incidence. It affects all age groups[1]. Incidence in children is 2-3% while 10% in adults[7]. The prevalence of urolithisias becomes more for so many years and treatment outcome is cost effective like ESWL, PCNL, URS, RIRS, Litholepexy and Laparoscopy. [(14)] It is prominent morbidity. Renal colic is severe form of pain for which patients present in causality department for management. Flank pain originates from kidneys[15]. Stone diseases cause obstructive uropathy and nephropathy. In Pakistan serious life threatening complications are about 12%. Hematuria is also an accompanying sign clinically in these patients[6].

There is wide range of distribution of patients with Urolethiasis geographically. Documentation may be justified due to difference in diet pattern, fluid intake, ethnicity, and climate[7]. Renal stone disease is endemic in South East Asia and Middle East. In Pakistan endemic areas for urolithiasis are across river, deserts and hilly areas[14].

The predisposing factors are genetically and metabolic abnormalities, while in the chemical constituents of urinary tract stones are calcium oxalate monohydrate in abundance about 85%, phosphate stones 7%, Uric acid stones 5% and struvite stones3%[3]. There is late presentation regarding treatment which is quite common. It leads to renal paren chymal destruction and end stage renal disease, which needs renal replacement therapy either in the form of dialysis or renal transplant[15].

The objective of the study was to determine the frequency of signs and symptoms of patients with Urolithiasis, that how the patients present their symptoms and signs on the basis of clinical assessment.

METHODOLOGY

A prospective descriptive study conducted at Sharif Medical & Dental College Lahore from 1st January 2016 to 31st December 2016 of patients coming in Urology OPD with Urolithiasis convenient sampling was made. Patients of all ages and sex, diagnosed cases of Urolithiasis will be included in the study with ultrasound, renal function tests and urine complete examination. Patients without having investigations and not willing to participate in the study will be excluded. All patients coming in outpatient department will be entered in structured proforma which will be designed after literature review. At the end of study all record well be collected and prepared for analysis. Pain score was done, using pain rating scale. All data will be entered into SPSS version 21, then frequency and percentages for each symptom and sign will be determined. Mean and standard deviation was calculated for age of patients.

RESULTS

From 740 patients the range of their age was 14 years to 90 years having mean+standard deviation as 41.66+16.53 years. Male patients were 585(79.1%) and female patients were 155(20.9%). Radiation of pain showed that stone was located at front in 330(44.6%), at groin in 280(37.8%) patients and at Ext. Genitalia in 130(17.6) patients.

Sudden onset of pain was found in 385(52%) patients and gradual onset was found in 355(48%) patients. Mild severity of pain was observed in 200(27%) patients, moderate severity was observed in 275(37.2%) patients and severe pain was observed in 265(35.8%) patients.

Intermittent pain was found in 370(50%) patients, continuous pain was observed in 370(50%) patients. Oliguria was present in 95(12.8%) patients, increased frequency was present in 300(40.5%) patients, dysuria was present in 220(29.7%) patients, urgency was present in 105(14.2%) patients and hematuria was present in 20(2.7%) patients. Nausea / vomiting was found in 510 (68.9%) patients while fever was found in 230(31.1%) patients. 420(56.8%) patients have the history of nephrolithiasis and 320 (43.2%) patients don't have history of nephrolithiasis. CVA tenderness was found in 160(21.6%) patients, palpable kidney was found in

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95(12.8%) patients and 485(65.5%) patients have normal examination.

	Min.	Max.	Mean	Std. Deviation
Age	14	90	41.66	16.534

Gender	Frequency	Percent
Male	585	79.1
Female	155	20.9

Pain radiation	Frequency	Percent
Front	330	44.6
Groin	280	37.8
Ext. Genitalia	130	17.6

Onset of pain	Frequency	Percent
Sudden	385	52.0
Gradual	355	48.0

Severity of pain	Frequency	Percent
Mild	200	27.0
Moderate	275	37.2
Severe	265	35.8

Timing of pain	Frequency	Percent
Intermittent	370	50.0
Continuous	370	50.0

Symptoms of Urlithisias	Frequency	%age
Oliguria	95	12.8
Increase Frequency	300	40.5
Dysuria	220	29.7
Urgency	105	14.2
Hematuria	20	2.7

Accompanying Symptoms	Frequency	%age
Nausia / Vomiting	510	68.9
Fever	230	31.1

Aggravation Factors	Frequency	%age
None	200	27.0
Movement	455	61.5
Rest	85	11.5

History of Nephrolithiasis	Frequency	%age
Yes	420	56.8
No	320	43.2

DISCUSSION

Urolithiasis is a worldwide problem since ancient times including all ages. Distribution of urolithisias varies according to geographical and socioeconomic factors. [(3)]While in our study the frequency of male was 79.1% which was higher incidence than female which was 20.9%, while it is upto 70% in developed countries. [(1)] In our study it is more because of hot weather climate and changing dietary patterns[2]. Anterior radiation of pain from loin to groin was 44.6% which was more marked and less in external genitalia 70.6%[12]. Pain onset was almost same percentage sudden or gradual no significant difference noted[7]. Grade of pain was of moderate intensity 37.2% which is notable, because our patients cannot attend the clinic, outdoor patient department or any physician until and unless the pain is unbearable. Pain relived with bed rest only in 11.5% patients[13]. Presentation of patients with Hematuria was 2.7% because patients understand and come earlier as an alarming symptom[6]. The incidence of palpable kidneys was less 12.8% which became hydronephrotic[6,7,8]. Frequency of nausea and vomiting was 68.9%, Oliguria was 12.8% while Dr. Prakash et.al reported vomiting / nausea 80%, oliguria 66% respectively which is almost statistically justified. In our study 56.8% patients presented with history of nephrolithiasis while 43.2% had no familial history[5].

In our study the frequency of oligurea renal failure was 12.8% while study conducted by Manzoor et al in 2013 reported frequency of renal failure due to renal calculi was about 8% leading to end stage renal disease. It is justified that due to urolithiasis with the passage of time the cases of renal failure and end stage renal disease are increasing. The answer is treatment modalities should be increased in parallel and with awareness in the public.

CONCLUSION

It has been concluded that the patients coming with flank, lumber pain along with vomiting, nausea, hematuria should be assessed carefully as negligence may lead to obstructive uropathy and hence renal failure. Our main object is to save the kidneys because urolithiasis is a leading cause of end stage renal disease, due to obstructive symptoms which cause paper thin cortex.

REFERENCES

1. Asayas Bosco CK, Rajasekaran S, Ramachandradu T , Maheswaram KV. A descriptive study of symptomatic nephrolithiasis in a tertiary teaching medical college hospital. Journal of current trends in clinical medicine and Laboratory Biochemistry.2014 Jul; 2 (3):20-2.
2. Parakash S, Sharma SK, Vikhe VB, Gaikwad Y Clinical profile of acute kidney injury in intensive care unit in tertiary care centre. Indian journal of Basic and Applied Medical Research. 2014,3(2):511-16.
3. Seitz C, Liatsikos E, Porpiglia F, et al; Medical therapy to facilitate the passage of stones. What is the evidence? Eur Urol .2009;56(3);455.
4. Honeck P, Wendt. Nordahl G, Kromback P, et al; Does open stone surgery still play a role in the treatment of Urolithiasis? Data of a primary Urolithiasis center. J Endourol. 2009 Jul 23(7):1209-12.
5. Straub M, Strohmaier WL, Berg W, et al; Diagnosis and metaphylaxis of stone disease. Consensus concept of the National working Committee on Stone Disease for the upcoming German Urolithiasis Guidline. World J Urol. 2005 Nov;23(5): 309-23.
6. Spivacow FR, del Valle EE, Lizcano A, Negri AL, Rey P. Hematuria as first sign of presentation in Urolithiasis. 2016; J Urol Res 3 (7): 1075.
7. Sadeghi S, Fazeli F, Zarifi E. Clinical characteristics and metabolic abnormalities in pediatric Urolithiasis in South East Iran. J Ped. Nephrology 2015;3(4):149-54.
8. Costas D, Lallas MD, Xiaolong S, Liu MD, Allen N, Chiura MD, Akhil K Das MD, Demetrius H, Bagley MD. Urolithiasis location and size and the association with microhematuria and stone-related symptoms. J Endourol. 2011 Dec. 25(12);1909-13.
9. Nasir Orakzai, Damian C hanbury, Kenneth Farrington. Screening for biochemical abnormalities in Urolithiasis patients. J Ayub Med Coll Abottabad Apr – Jun 2004; 16(2):60-3.
10. Bilquis Lakhany, Jamshed Akhtar, Yasmin Kazi. Pediatric Urolithiasis as a cause of chronic renal failure. J Surg Pak Mar 2004;9(1):30-2.
11. Naeem M, Anwar K. Iatrogenic injuries of renal pelvis and Ureter following open surgery for Urolithiasis. J Pak Med Assoc; 2001; 51(8):282-5.
12. Arif Pervez Rajput, Saadat Khan, Masha Khan, Din S, Haq Nawaz. Present trend of Urolithiasis in Balochistan: A single center experience. J Coll Physicians Surg Pak Oct 2002; 12 (10):618-22.
13. Amar-ul-Ala Butt, Muhammad Khurram, Ashfaq Ahmed, Zubair Hasan, Ahmed Rehman and M.A Farooqi. Extracorporeal shock wave lithoripsy. JCPSP 2005; 15 (10): 638-641.
14. Manzoor Hussain, Altaf H Hashmi, Syed Adeeb ul Hassan Rizvi . Problems and prospects of Neglected Renal Calculi in Pakistan. Ednourology and Stone Disease 2013;10(2):849-855.
15. Sakhuja V , Sud K. End-stage renal disease in India and Pakistan: burden of disease and management issues. Kidney Int Suppl. 2003 Feb;(83):S115-8.