

A Descriptive Study of Symptomatic Nephrolithiasis In A Tertiary Teaching Medical College Hospital

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ABSTRACT

Nephrolithiasis is a very common clinical presentation in our surgery outpatient department. Only few patients need hospitalization and surgical intervention for complications. Obstructive complications are one of them which need to be identified promptly. Hence in a busy outpatient department care must be taken to do over look them, as it carries greater risk of renal failure if not managed timely.

KEY WORDS : Nephrolithiasis, Renal calculi, Hydronephrosis

Introduction

Aim and Objectives:

The study is primarily intended to analyse the nature of nephrolithiasis and its distribution, to identify the predominance in renal system, to identify obstructive complication in symptomatic nephrolithiasis, plan based on renal function and obstructive complication for early referral to the urology department.

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Methods and Materials

A retrospective descriptive study, our study period from May 2013 to December 2013 and the data collected from chart review, laboratory investigation and ultrasonography.

Inclusion criteria

Who presented with symptoms and signs of nephrolithiasis and undergone a renal function test and an ultrasound of renal system.

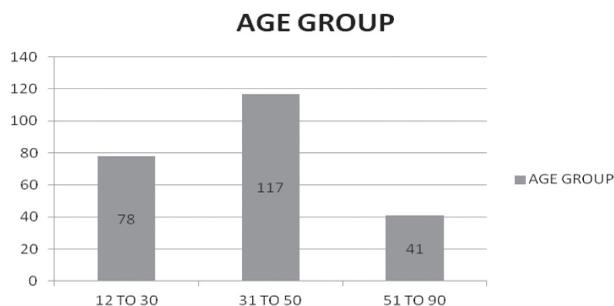
Exclusion criteria

Patient who has not been investigated has been excluded.

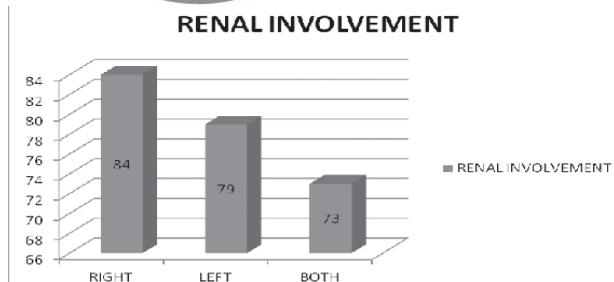
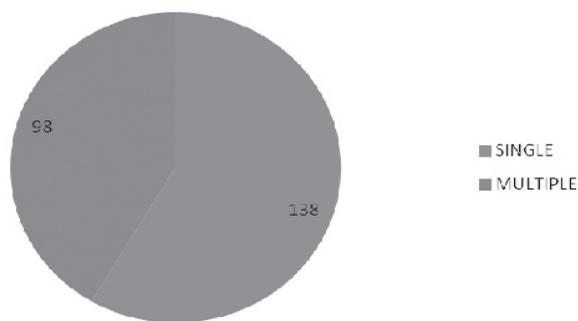
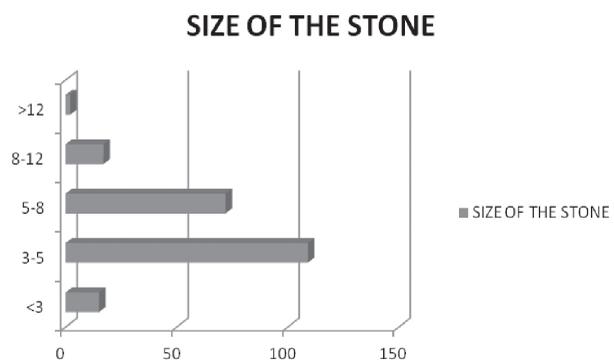
Results

A total of 236 patients records were extensively studied by our team, Results analysis using Microsoft excel was done.

From our study of 236 patients diagnosed as cases of nephrolithiasis, 70% of which are male patients. 50% patients belonged to the age group of 31-50 years. The youngest patient in the study was 12 years of age.

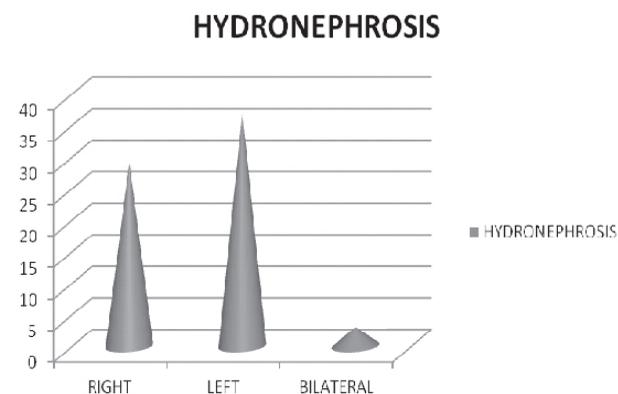


The size of the calculi in 46% of the cases is ranging from 3-5 mm. 58% cases have single calculus 42% cases have the presence of multiple calculi in the kidney.



95% of the hydronephrosis is unilateral. Out of 36% cases with right renal involvement, 42% cases have hydronephrosis, out of 33% cases with left renal involvement, 53.6% cases have hydronephrosis.

Of the 31% cases with both the kidneys involved, only 4% cases have hydronephrosis.



Discussion

Nephrolithiasis is a very common problem globally and its incidence and prevalence has increased tremendously[1]. The epidemiology of nephrolithiasis differs according to geographical area and socio-economic conditions and 70% are seen in developed countries[2].

A symptomatically significant stones range from 3mm to 5mm which can actually pass through the urinary tract as the narrowest portion of the renal system the vesicoureteral junction is 5mm but due to the stone impaction there is mucosal edema which narrows the lumen results in hydronephrosis[3].

So the size of the calculi does not matter due to the mucosal edema narrowing the lumen. The study shows that hydronephrosis is involved in 30% of our study population.

The age distributions with respect to distribution we had a patient 12 year old child also. So the pediatric age is no exemption. It can occur in any age group including pediatric age group[4-5].

And it is commonly seen as unilateral involvement and at times can be a mega ureter[6] than bilateral involvement of kidney. 53.6% of the cases occurred on the left side. And it is essential for an investigation to detect the obstructive complication and Intravenous pyelography is indicated[7] to see nephrolithiasis related renal damage[8].

Conclusion

In our study of 236 patients with nephrolithiasis, we have come to a conclusion that it is essential to investigate all patients with signs and symptoms of renal calculi for early deduction of obstructive complication and preventing end stage renal disease. And investigation of renal function test or CT of Kidney Ureter Bladder can be done. And prompt referral to urology department for active intervention is essential to prevent renal damage due to nephrolithiasis.

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