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Demographic Profile, Incidence and Prevalence of Pelvic-Ureteric Junction Obstruction (PUJO)

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Abstract: Demographic profile, incidence and prevalence of pelvic-ureteric junction obstruction in Indian population: our experience. Settings and Design: This is a retrospective observational study from October 2003 to December 2013. Data were retrospectively collected from Operation Theatre, emergency department and outpatient department record. A total of 51000 patients was presented to our urology department from October 2003 to December 2013.503 patients with PUJO were presented to our department. Patient's age, sex, mode of presentation, laterality and presence of crossing vessels was recorded from our database. SPSS version 20 was used for Statistical analysis Mean age of presentation was 3.26+/-0.197 years. Male and female ratio was 2.93. 63.2% presented with flank pain, 17.9% with fever, 11.7 % with lump and 7.2% with other symptoms (UTI, Haematuria, nausea and vomiting). In 39.3% right sided 57.3% left side while 3.4% bilateral involvement. Ratio (left/right) was 1.38. In 25.5% cases, there was crossing vessel. The incidence was 1 in 1000 populations. Prevalence was 0.99%.PUJO is more common in male and its prevalence is 0.99%.
Keywords: demographic profile, incidence, prevalence, pelvic ureteric obstruction.

INTRODUCTION

Pelvic ureteric junction obstruction (PUJO) is the most common congenital abnormality of the urinary tract. PUJO is classified as primary (congenital or intrinsic) when dysfunctional smooth muscle and excess collagen deposition leads to hydronephrosis with clockwise rotation of the renal pelvis and a high ureteral origin[1-4].

It also occurs commonly as a secondary (acquired or extrinsic) abnormality, where a crossing vessel (i.e. lower pole artery), a fibrous band or other disease (retroperitoneal fibrosis, renal cysts, xanthogranulomatous pyelonephritis, malignancy) lead to obstruction by compression and kinking at the junction[5-6]. Various studies have been reported, its prevalence, demographic profile and presentation mode. There was no study which reported these parameters in Indian population. Here we are presenting these data in Indian population.

METHODS

This is a retrospective observational study. Data were retrospectively collected from Operation Theatre, emergency department and outpatient record. A total of 51000 patients was presented to our urology department from October 2003 to December 2013. Out of these 503 patients were diagnosed as pelviureteric junction obstruction (PUJO). Routine blood investigation, ultra-sonography, urine routine and culture and renal scan were done. Type of operation, whether open or laparoscopic pyeloplasty, and presence of the crossing vessel was noted through intra-operative record. Patient's age, sex, mode of presentation, laterality and presence of crossing vessels was recorded from our database.

RESULTS

Mean age of presentation was 3.26+/-0.197 years. Male and female ratio was 2.93. 63.2% presented with flank pain, 17.9% with fever, 11.7 % with lump and 7.2% with other symptoms (UTI, Haematuria, nausea and vomiting). In 39.3% right sided 57.3% left side while 3.4% bilateral involvement. Ratio (left/right) was 1.38. In 25.5% cases, there was crossing vessel. (table no. 1&2). The incidence was 1 in 1000 populations. Prevalence was 0.99%.

Table-1: Demographic profile

Mean age	3.26± 0.197 years
Male and female ratio	2.93
Right sided involvement.	39.3%
Left sided involvement	57.3%
Bilateral involvement	3.4%
Crossing vessel	25.5%

Table-2: Mode of presentation

Abdominal pain	63.2%
Fever	17.9%
Lump	11.7%
Other symptoms (UTI, Haematuria, nausea and vomiting)	7.2%

DISCUSSION

Pelvi-ureteric junction obstruction is the most common congenital anomaly of the urinary tract. Its prevalence and demographic profile were reported in various studies. There is no study which reported this parameter in Indian population. It is more common on the left side and in the male population in this study similar results were found by Ciftci H *et al*.[7]. The most common presentation of this study is abdominal pain similar finding was found by Khan M *et al.* [8] Crossing vessel was found in 25.5%, which is less than Singh S K, *et al*. [9] and more than Mandhani *et al*. [10], Zhang *et al.*[11].

CONCLUSION

PUJO is more common in male and its prevalence is 0.99%. The most common presentation is flank pain.

No conflict of interest

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