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DJ-STENTING;
EFFICACY IN THE MANAGEMENT OF OBSTRUCTIVE UROPATHY

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ABSTRACT... aghaffaruro2004@vahoo.com Background: Obstructive Uropathy is a serious urological emergency. Upper tract Obstruction when it is bilateral or in solitary functioning kidney can lead to renal Impairment resulting in oliguria and anuria. Dialysis or Urinary Diversion by PCN and Retrograde Stenting is required. Purpose of this study was to prove the efficacy of DJ Stenting in cases of obstructive uropathy. D J Stenting overcomes the Emergency and elective definite treatment can be planned when patient is fairly fit and renal functions have come to normal. Study design: It was retrospective, convenient and descriptive type of study. Material and Method : It comprised of 33 cases of obstructive uropathy presented in urology department of PIMS Islamabad from 2001 to 2002 .Patients with Bladder and Prostate Malignancy and other causes of infra vesical obstruction were excluded from study. Results: Male to female ratio was 1.4:1 .Age ranged from 25 to 70 years Pain alone or Pain with Oliguria and Anuria was the major presentation. Stone disease was the cause in 31(93.93%) patients. Serum creatinine was >10 mg/dl in 15 case (45.45 %) preoperatively. Stenting was done in 10 cases bilaterally and in 23 cases unilaterally. Postoperatively creatinine became normal in 10 cases (30.30%) and reduced to range of 1.2 to 2 mg/dl in 8 cases(24.24%). So 54.54% improved dramatically. Hospital stay was one week in in 22 cases (66.66%)and >one week in 11 cases. Ten cases required dialyses preoperatively. Conclusion: Retrograde stenting is an easy procedure for the management of obstructive uropathy required no general or regional anesthesia and external ports.

INTRODUCTION

Obstructive uropathy is the structural impedance to the flow of urine any where along the urinary tract. If long standing it can damage the renal Parenchyma leading to medullary and cortical atrophy1. Infra vesical obstruction can cause LUTS and retention of urine initially. This must be differentiated from upper tract obstruction which if bilateral or obstructed solitary functioning system results' in anuria. Failure to excrete urine for 12 hours is urological emergency. This can result in severe uremia and electrolyte disturbances. Surgery in patients with renal failure is associated with risk of renal and extra renal morbidity.[2] Early diagnoses and management can save the life. Causes can be intra luminal .intramural or extra Luminal. Diagnoses is based on History of pain, anuria or oliguria along with general symptom, Physical examination and investigations like Blood CP,

RFT, Serum Electrolytes, USG renal tract, X-Ray KUB can

help to reach the final diagnoses. Helical CT, Retrograde studies, isotope studies, Renal Biopsy and Angiography can be helpful .Management of established obstructive uropathy needs urgent intervention. Hyperkalemia and acidosis if severe may need temporizing measures. Itthe patient is not fit for definite treatment then Dialyses and Urine diversion by Retrograde stenting or PCN are the only options[3]. Retrograde D J Stenting helps internal drainage, minimal complications ,no extra care .short hospital stay and dilates the ureter that helps in definitive treatment4. Complications of urinary calculi can be managed by stenting[5]. In contrast PCN is external drainage,needs extra care with risk of dislodgement and radiation exposure. Purpose of this study was to see the efficacy of DJ Stenting in cases of obstructive uropathy.

MATERIAL AND METHODS

It was a retrospective, convenient and descriptive type of study. It comprised of 33 cases of Obstructive uropathy presented to urology department PIMS Islamabad from 2001 to 2002. Patients with bladder and prostate malignancy and other causes of infra vesical obstruction were excluded. Also the patients who were fit for definitive procedure or who were unfit for intervention based on medical grounds were excluded. Patients underwent DJ stenting under local anesthesia with some sedation. Post operative X-ray KUB was done to see the proper placement of stent. Patients were kept hospitalized and daily flow sheet including vitals, daily weight, intake output and lab data comparison chart was maintained. Results were tabulated and assessed.

RESULTS

Sex distribution

There were 19(57.6 %) male and 14(42.4%) female patients with male to female ratio of 1.4:1.

Age Groups

Age ranged from 25 to 70 years Maximum patients 18 were in range of 36 to 55years and maximum age was 70 years.

Age Group	No. of Cases	% Age
25-35 Years	9	27.3%
36-45 Years	9	27.3%
46-55 Years	9	27.3%
>56 Years	6	18.2%

PRESENTING COMPLAINTS

Pain alone in 8 cases and pain with anuria 7cases,oliguria 3cases,general symptoms 3,routine 3 and missing 4 cases. So pain and oliguria and anuria was the most frequent presentation (51.5 %)

DURATION OF SYMPTOMS

Ten patients presented within one week,07 within one Month and 06 within six months. Four were carrying the problem over years and 06 were missing the onset of symptoms. Minimum duration of presentation was 02 days and maximum of 05 years.

RENAL UNIT INVOLVED

Right renal tract was involved in 06 cases and Left in 0 9 cases while 18 (54,5%) patients had Bilateral obstruction. Upper half of ureter was obstructed in 28 and lower half in 04 patients. Kidney was non-functional, atrophic or absent in six cases.

CAUSE OF OBSTRUCTION

Stone disease was the major cause of obstruction in 31 cases (93.9%).Other were one case of Ca cervix and one case of ca rectum.

PRE-OP CREATININE

Preoperative creatinine ranged from Minimum of

5.2 mg/dl to Maximum of 27mg/dl. Fifteen patients (45.4%) had creatinine more than 10 mg/dl. Four had range of 5-9 mg/dl and rest 14 had creatinine of <05 mg/dl. Five patients had creatinine >15 mg/dl.

STENTING

DJ stenting was done and was successful bilaterally in 10 cases and unilaterally in 23 cases and among these 10 were on right side and 13 on left side. Twelve were stented on left side and 6 on the right side and bilateral stenting done in 10 cases, Lt stenting done in five cases of bilateral obstruction and in two cases on right side.

POST-OP CREATININE

Max post op was 13, 11, and 9.8 mg/dl. Ten patients (32%) had creatinine >2 mg and 08 had 1.2 to2 mg/dl. Rest of 15(45.4 %) had normal creatinine level.

DURATION OF HOSPITAL STAY

Twenty two patients (66.6 %) were discharged within one week while 11 were to stay more than a week. Longer stay was due to post obstructive diuresis.

DIALYSIS

Dialysis was required in 10 (30 %) cases and these were almost all bilateral cases.

DISCUSSION

Obstructive uropathy when acute needs urgent treatment. Most common cause of upper tract obstruction is stone disease3. Bennani S reported 60% of cases in his series of 30 cases of obstructive anuria while in our study stone was the major cause in 93.9%. Hubner W A reported extramural compression as the most frequent cause of upper tract obstruction ^Success rate of D J Stenting was 100 % in our series but Mukhmalji H, in his comparative study of PCN vs DJ stent in management of hydronephrosis caused by stone7 revealed 80 % success rate of DJ Stenting where as he was successful in 100 % of cases selected for PCN. Based on radiation exposure, use of antibiotics and analgesics and reduction on quality of life he found PCN superior to DJ Stenting, This is in contrast to our study where patients recovered and had no botheration of external ports and their care. Twenty three patients (69.6%) had creatinine of <2 mg/dl on discharge after one week. Thirty percent cases mostly of B/L obstruction required dialysis which is almost the same of 32 % in study of Joual8. Dialysis was indicated because of major metabolic disorder.

CONCLUSION

Retrograde stenting is an easy procedure for the management of obstructive uropathy required no general or regional anesthesia and external ports.

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