Xanthogranulomatous pyelonephritis

(Report of Two Cases)

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Xanthogranulomatous pyelonephritis is an atypical form of severe chronic renal parenchymal infection. Its manifestations mimic those of neoplastic and other inflammatory renal parenchymal diseases and consequently it is often misdiagnosed clinically.[7] We have come across recently two such cases of xanthogranulomatous pyelonephritis which forms the basis of this presentation.

CASE REPORTS

Case 1:

S.N., a 50 year old, diabetic, male patient on insulin therapy was admitted with a history of fever with rigors and burning micturition of 10 days' duration. He had a history of recurrent urinary tract infection in the past. Clinically, he was febrile, normotensive, with a tender lump in the right lumbar region. The urine showed trace proteinuria, plenty of pus cells and 5-10 RBCs/HPF. *Proteus mirabilis* was grown on urine culture sensitive to colistin with which he was treated for 14 days. Intravenous urography showed a poorly functioning right kidney of 13 x 7 cm in size. The left kidney was normal. Since the patient failed to respond to medical therapy, he was taken up for surgery with the suspected diagnosis of right sided pyonephrosis. A right nephrectomy was done. The right kidney was enlarged with a thick capsule. The external surface showed multiple yellowish nodules with scattered haemorrhages. The cut section showed linear abscesses in the cortex as well as in the medulla. The pelvis was normal. Microscopically, there was marked destruction of renal parenchyma with presence of intense inflammatory infiltrates of lymphocytes and plasma cells. At places, there were nodular foci of collections of histiocytes with clear cytoplasm staining positively for lipid. (Xanthoma cells.) After surgery the patient recovered uneventfully.

Case 2:

R.P., a 34 year old male patient was admitted with a history of intermittent colicky pain in the left loin for 2½ years and occassional calciuria and hematuria. He was operated for a right ureteric stone 3 years earlier.

On examination, the patient was found to be pale, with a B.P. of 140/90 mm Hg and pulse of 110 per minute. There was tenderness in the left loin. His haemoglobin was 6.9 gm%, W.B.C. count was 16,300 per cumm, with P—95% and L—5%. Urine showed a trace of albumin, 20-30 pus cells/HPF and occassional RBCs. Urine culture revealed *Klebsiella*, sensitive to cephalexine. Since his BUN was 204 mg%, and serum creatinine 7.3 mg%, he was given 10 hemodialyses, after which his serum creatinine came down to 2.5 mg%. Intravenous urography showed a nonfunctioning left kidney of 12.5 x 6 cm in size. The right kidney was normal in size and function with mild dilatation of pelvicalyceal system. The ascending pyelogram on the left side showed multiple radioluscent areas distorting the dilated pelvicalyceal system. Grade IV vesicoureteric reflux with the radioluscent areas was seen in the micturiting cystourethrogram (Fig. 1). A left nephrectomy was performed. On gross examination of the specimen, the kidney was found to be enlarged with multiple yellowish nodules and

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a thick capsule. Histologically, the characteristic foam cells were seen in these areas.

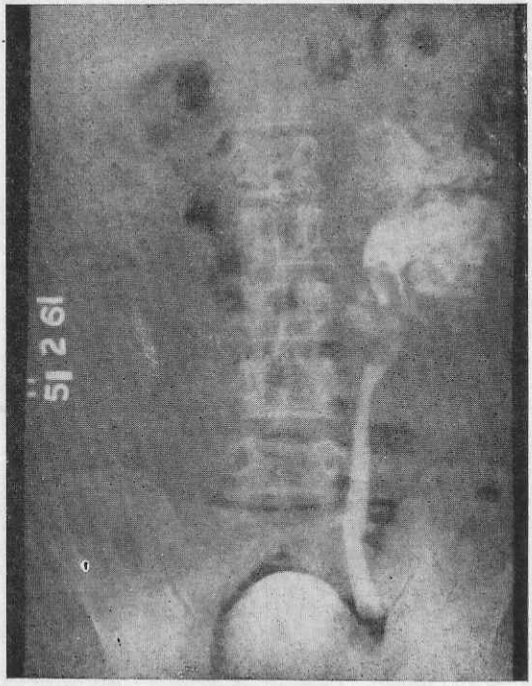

FIG: 1. Micturiting cysto-urethrogram showing grade IV vesicoureteric reflux on the left side.

The post-operative course was uneventful. After 1 year of follow-up the patient is asymptomatic with a BUN of 10 mg% and serum creatinine of 1.7 mg%.

DISCUSSION

Xanthogranulomatous pyelonephritis is an uncommon disease accounting for only 1 per 1000 surgically proved cases of chronic pyelonephritis.[3] Both our patients were males, although the disease is reported to be common in females.[1,3,5,7] Recurrent urinary tract infection, diabetes and calculus disease are well known associations with xanthogranulomatous pyelonephritis. Clinically, both the patients presented like pyonephrosis. This is often the situation in patients with xanthogranulomatous pyelonephritis, when a pre-operative diagnosis is seldom correctly made. Majority of the patients are thought to have renal cell carcinoma, hydronephrosis, pyenephrosis or renal tuberculosis.[2,4,5,7] The interesting feature in the second case was the presence of Grade IV vesicoureteric reflux on the diseased side. Nephrectomy had to be performed in both the patients with good results. Xanthogranulomatous pyelonephritis does not recur and the prognosis is excellent in patients who have otherwise a normal urinary tract.[7] However, a long term follow-up is required.

SUMMARY

Two cases of surgically proved, xanthogranulomatous pyelonephritis are reported. Grade IV vesicoureteric reflux was additionally present in the second case on the diseased side.

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