



RARE PRESENTATION OF CORTICOMEDULLARY NEPHROCALCINOSIS IN A CASE OF ACTIVE PULMONARY TUBERCULOSIS

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ABSTRACT

Nephrocalcinosis is an uncommon clinical entity characterized by pathological deposition of calcium salts within the renal parenchyma and is most frequently associated with metabolic disorders such as hyperparathyroidism, renal tubular acidosis, and vitamin D dysregulation. Granulomatous diseases, including tuberculosis, are a rare but recognized cause due to altered calcium metabolism. We report a rare case of corticomedullary nephrocalcinosis in a 45-year-old male with active pulmonary tuberculosis presenting with rapidly progressive renal failure secondary to obstructive uropathy.

The patient presented with oliguria, hesitancy, intermittent hematuria, vomiting, and features of volume overload for two months while on antitubercular therapy. Imaging studies revealed bilateral bulky kidneys with corticomedullary nephrocalcinosis, preserved corticomedullary differentiation, left-sided hydronephrosis, and right-sided moderate hydronephrosis. Laboratory evaluation demonstrated anemia, elevated serum creatinine, hypercalcemia, hyperphosphatemia, and hyperuricemia. Further metabolic workup showed vitamin D deficiency with elevated intact parathyroid hormone levels, while urine analysis remained unremarkable. Urological intervention for obstructive uropathy resulted in significant improvement in urine output and renal function. Continued low-dose antitubercular therapy along with vitamin D supplementation led to clinical and biochemical improvement on follow-up.

This case highlights pulmonary tuberculosis as a rare but important cause of corticomedullary nephrocalcinosis leading to rapid renal deterioration. Early recognition and screening for nephrocalcinosis in pulmonary tuberculosis patients may help prevent progression to chronic kidney disease.

KEYWORDS

INTRODUCTION

Chronic Kidney Disease secondary to nephrocalcinosis has been reported in Indian Literature, however cause of Pulmonary TB leading to Nephrocalcinosis presenting as a rapidly progressive renal failure due to obstructive uropathy is rare. We hereby report once such a cause of Rapidly progressive renal failure with Pulmonary TB with incidental finding of Nephrocalcinosis progressive to CKD.

CONTEXT

A 45 y old male patient presented with oliguria, hesitancy, renal angle fullness with occasionally hematuria with features of volume overload since 2 months and vomiting. On evaluation was found to be having pulmonary tuberculosis on AKT since 2 months.

On examination, tenderness at both renal angles were noted and on USG KUB and CT, bilateral bulky kidney with Left sided Hydronephrosis and Right sided Moderate Hydronephrosis with bilateral Nephrocalcinosis in Corticomedullary Junction with preserved CMD and increase echotexture was found. On Lab reports, Anemia was noted with increased Creatinine, Calcium, phosphorus and uric acid.

To evaluate further cause of nephrocalcinosis, we found Vitamin D deficiency and increased Intact PTH levels with normal urine analysis. For obstructive uropathy, urological intervention was done and that led to improvement in the renal function and urinary output. With continuation of low dose AKT and active Vitamin D Supplements, patient presented with improvement in follow up.

CONCLUSION

Pulmonary tuberculosis is endemic in India being granulomatous disease extra pulmonary calcification and renal parenchyma prediction extra pulmonary calcification.

Corticomedullary calcinosis due to secondary to pulmonary TB is rarely being reported, however extrapulmonary TB with nephrocalcinosis reported very frequently. We are bring light to this topic that Pulmonary TB can lead to Nephrocalcinosis and rapidly progressive Tuberculosis infection, so our aim is to find out the

correlation and importance of screenin Nephrocalcinosis in Pulmonary TB patients to prevent progression of renal dysfunction.

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