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Renal calculosis in patients with distal renal tubular acidosis

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Introduction: Distal renal tubular acidosis (dRTA) is a metabolic disorder characterized by a non-anion gap metabolic acidosis, accompanied by an alkaline urinary pH that does not fall appropriately during an exogenous acid load. Patients with dRTA often present a radiographic picture of nephrocalcinosis and typically harbor calcium phosphate stones in the form of hydroxyapatite.

Aim of this study was to investigate the presence of renal calculi in patients with dRTA in Montenegro and its characteristics.

Methods: Data were collected from histories of patients with confirmed diagnosis of dRTA.

Results: In Montenegro there are 3 patients with confirmed diagnosis of dRTA. There are two female and one male patient. In female patients diagnosis was confirmed in the age of 35 and 40, respectively and in male patients it was confirmed in the age of 10. In all three patients nephrocalcinosis was confirmed during the treatment and in all three patients calcium phosphate stones in the form of hydroxyapatite were confirmed. Male patient had vesicoureteral reflux and megavesica which were surgically treated. Afterwards he had many episodes of kidney obstructions and infection due to presence of many renal calculi. He had left nephrectomy in the age of 27, and the right nephrectomy in the age of 28. He got chronic kidney failure in the age of 19 and now he is on regular haemodialysis program. Other two female patients had many episodes of urinary tract infections and they were treated with ESWL many times. The older one developed chronic renal failure, but without need of renal replacement therapy yet, and the younger still has normal kidney function.

Conclusion: All three patients with confirmed diagnosis of dRTA had nephrocalcinosis and many episodes of urinary tract obstruction and infection. Calcium phosphate stones in the form of hydroxyapatite were confirmed in all three cases.

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