

Gluten enteropathy presenting as kidney stones

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Background

A 70 year old patient was referred for metabolic work up after a second renal colic. His previous history included a first renal colic at the age of 23 and a fast bowel transit of 30 minutes from stomach to colon at the age of 63.

Case report

The patient now presented with a second renal colic at the age of 70.

A CT scan showed hydronephrosis due to a 5 mm stone in the left ureter as well as numerous stones in both kidneys. The stone was retrieved through ureteroscopy.

Stone analysis with infrared spectroscopy revealed 25% calciumoxalate dihydrate and 75% calciumoxalate monohydrate.

Blood analysis showed normal calcium, PTH and bicarbonate values.

Urine analysis in two 24 hour collections was as follows:

Urine analysis	First collection	Second collection
Diuresis ml/24h	2650	2600
pH		5.7
Creatinuria mg/24h	1328	1318
Natriuria mmol/24h	110	153
Calciuria mmol/24h	3.1	3.8
Citraturia mg/24h	<26	<26
Oxaluria mg/24h	45	54

The low citraturia and the high oxaluria was suggestive of a malabsorption syndrome.

A gastroscopy with duodenal biopsies was performed. Pathological examination of the biopsies showed partial villous atrophy with on immunohistochemistry CD3-stain showing marked increase of intra-epithelial lymphocytes.

The diagnosis of gluten enteropathy type 3B was made.

Conclusion

Gluten enteropathy can present as calciumoxalate stone with low citrate and high oxalic acid in the urine.

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