Table 2

Metabolic disorders implicated in the pathogenesis of renal stones

Stone type	Urinary abnormality	Pathophysiological conditions	
calcium	hypercalciuria	hypercalcaemia	primary hyperparathyroidism
			sarcoidosis
			malignancy
		idiopathic[a]	autosomal dominant
	hyperoxaluria	enteric	malabsorptive conditions[b]
		genetic	primary hyperoxaluria
	hypocitraturia		metabolic acidosis
			hypokalaemia
			hypomagnesaemia
struvite	urinary tract abnormality	anatomical urinary tract infection	n/a
			urease-producing organisms, for example, *proteus*
uric acid	hyperuricosuria	acquired	dietary
			cellular breakdown[c]
		genetic	Lesch-Nyhan syndrome
cystine	hypercystinuria	genetic	autosomal recessive

[a]Excess urinary calcium excretion with no identifiable cause. There is an estimated prevalence of 40 per cent in patients with calcium stones compared with 10 per cent in the general population

[b]Crohn's disease, short bowel syndrome, chronic pancreatitis, biliary obstruction

[c]Tumour lysis syndrome, myeloproliferative disorders