**Introduction**

Renal manifestations in patients with thalassaemia include proximal tubular dysfunction and glomerular proteinuria. Mechanisms may include iron overload, chronic anaemia and use of iron chelators. Bone disease is well recognised in thalassaemia patients, due to similar mechanisms. The combination of renal tubular disease and bone disease is associated with renal stone disease. We have observed that our thalassaemic patients are often referred for treatment for renal stones, but the reason for this association is unknown. The general population lifetime risk of renal stone disease is 5-10%. The object of this study was to analyse the prevalence and type of renal stone disease in thalassaemic patients at a single centre.

**Methods**

The available notes, clinic letters, and imaging of 183 thalassaemic patients treated at the Whittington Hospital between December 2012 and September 2017 were manually reviewed. Electronic notes and results of 8 patients investigated by the Metabolic Stone Clinic at the Royal Free Hospital were also reviewed. Individual ‘stone events’ were defined as spatially and/or temporally discrete renal calcification seen on imaging or events/procedures recorded in the patient’s notes.

**Results**

27 of the 183 patients reviewed had at least one recorded stone event, giving a lifetime prevalence of 14.8% in the study population. Total stone events counted in these patients was 58 (mean 2.15 per stone-forming patient, median 2; range 1 to 5). Data on stone composition was available for 8 events, all of which were calcium stones (6 predominantly calcium phosphate, 2 predominantly calcium oxalate). All these patients had osteopenia or osteoporosis confirmed on DEXA scan and were on long term oral and/or intravenous iron chelation therapy.

**Conclusion:**

Our data show increased prevalence of renal stone disease in patients with thalassaemia compared to the general population. These are all calcium stones, which may imply a link to thalassaemic bone disease. Thalassaemic patients that do form stones are more likely to continue forming them in the future.