Hypercalcaemia: an unusual presenting feature of childhood acute lymphoblastic leukaemia

A 3-year-old boy was referred for management of severe symptomatic hypercalcaemia. His parents reported increasing lower limb pain and weakness over the preceding 4 months. Examination indicated a bedbound, pale, irritable child with generalized bony tenderness and peripheral lymphadenopathy; there were no palpable abdominal masses. The serum calcium was 5.3 mmol/l; serum phosphate, alkaline phosphatase and intact parathormone (PTH) were normal. Skeletal radiographs showed striking osteopenia and osteolysis in the skull and all long bones (images). Blood counts showed anaemia (Hb 87 g/l) and mild thrombocytopenia (platelet count 134 × 10^9/l); peripheral blood microscopy was unremarkable.

Bone marrow studies led to a diagnosis of B-cell precursor acute lymphoblastic leukaemia (CD34, CD10, CD19 and cytoplasmic μ chain positive on immunophenotyping). Bone marrow karyotyping showed 46,XY. Molecular screening for ETV6-RUNX1, TCF3-PBX1 and BCR-ABL1 oncogenes was negative.

Revathi Rajagopal¹, Su Han Lum¹, Muhammad Yazid Jalaludin¹, Shekhar Krishnan¹, Wan A. Abdullah¹ and Hany Ariffin¹²

¹Department of Paediatrics, University of Malaya Medical Centre, and
²University of Malaya Cancer Research Institute, University of Malaya, Kuala Lumpur, Malaysia. E-mail: suhanlum@gmail.com