Indian J Med Res 152 (Supplement), November 2020, pp 222-223
DOI: 10.4103/ijmr.IJMR_2371_19

Quick Response Code:

Phosphaturic mesenchymal tumour: A rare tumour & its diagnostic dilemma

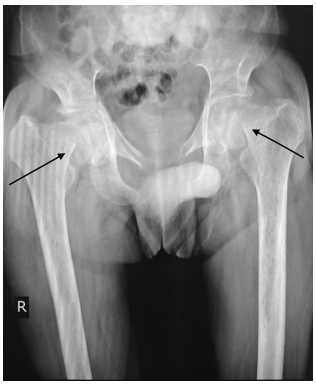

Fig. 1. Bilateral malunited subcapital neck femur fractures (arrows) and coxa vara deformity.

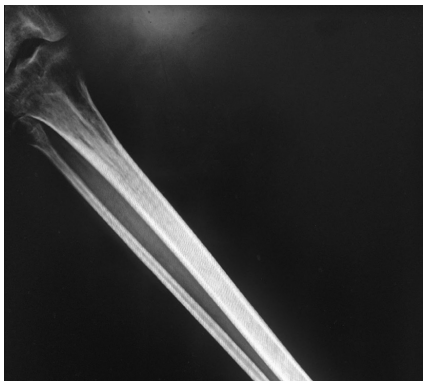

Fig. 2. A seemingly normal radiograph of the knee joint and tibia anteroposterior view.

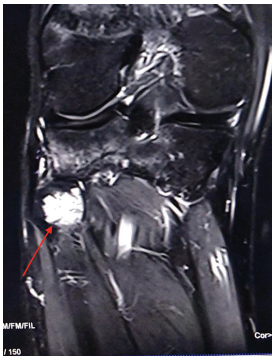

Fig. 3. STIR magnetic resonance imaging coronal image with a hyperintense signal intensity in the right proximal fibula (arrow).

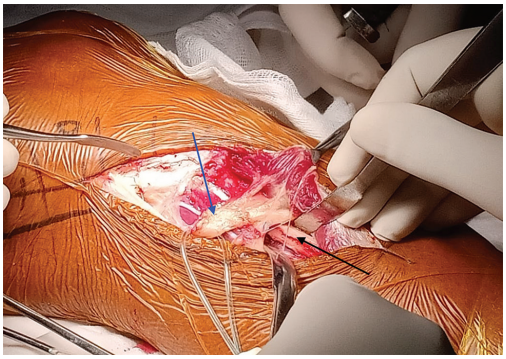

Fig. 4. Intra-operative photograph demonstrating the common peroneal nerve (blue arrow) dissected free off the right proximal fibula (black arrow).

A 32 yr old male[†] presented to the department of Orthopaedics, Seth G.S. Medical College, Mumbai, India, in July 2019, complaining generalized arthralgia, weakness and difficulty in walking (Fig. 1) for the past five years and was diagnosed as a case of phosphaturic mesenchymal tumour (PMT) of the proximal fibula with severe osteomalacia and elevated fibroblast growth factor (FGF)-23 (Figs 2 and 3). Surgical

[†]Patient consent obtained to publish clinical information and images.

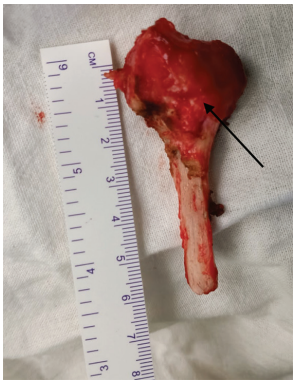

Fig. 5. Intra-operative image demonstrating dissection of expanded right proximal fibula (arrow) and excision of proximal fibula around 6 cm of length with normal tumour-free margin.

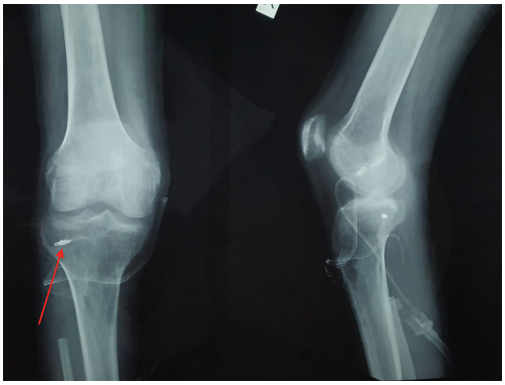

Fig. 6. Post-operative radiograph with proximal fibula excision and reattachment of the lateral ligament complex by suture anchor (arrow).

excision of the right proximal fibula was planned and carried out along with calcium, phosphate and vitamin D supplementation (Figs 4-6). Post-surgery, the patient's phosphate and FGF-23 levels returned to normal and his symptoms largely resolved at seven months of follow up.

PMTs are rare tumours which are frequently associated with tumour-induced osteomalacia that manifests as renal phosphate wasting. It should be kept as a differential diagnosis in mind when treating patients with severe osteomalacia and pathological fractures (Fig. 1) because isolated calcium and vitamin D supplementation is inadequate to treat this uncommon condition and renal phosphate wasting promptly resolves upon removal of the tumour.

***Conflicts of Interest*:** None.

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Received November 20, 2019