Letter to the Editor

Giant subperiosteal hematoma

Paul Ornetti[1], Romaric Loffroy[2], Laurent Grimault[3], Olivier Chevallier[2], Pierre Pottecher[2]

[1]Department of Rheumatology, Plateforme d'Investigation Technologique, INSERM 1093, François-Mitterrand Teaching Hospital, Dijon, France; [2]Department of Radiology, Section of Musculoskeletal Imaging and Intervention, LE2I UMR CNRS 6306, François-Mitterrand Teaching Hospital, Dijon, France; [3]Department of Rheumatology, Les Chanaux Hospital Center, Macon, France

Correspondence to: Prof. Romaric Loffroy, MD, PhD. Department of Radiology, Section of Musculoskeletal Imaging and Intervention, LE2I UMR CNRS 6306, Arts et Métiers, University of Burgundy, François-Mitterrand Teaching Hospital, 14 Rue Paul Gaffarel, BP 77908, 21079 Dijon Cedex, France. Email: romaric.loffroy@chu-dijon.fr.

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A 22-year-old patient, who had been bedridden since childhood following mitochondrial encephalopathy was hospitalized for a pulmonary infection. Following the discovery of a voluminous painless tumefaction of the left thigh, lower extremity Doppler examination and X-rays showed a well-defined soft-tissue mass surrounding the femur, with no signs of hypervascularization on the Doppler sonography. A complementary computed tomography scan revealed an old, non-displaced metaphyseal fracture associated with extensive subperiosteal hematoma of the femur (*Figure 1*). The eccentric ossification surrounding the mass encompassed the femoral shaft lifting muscles off the cortex to give an appearance of periosteal stripping as shown on three-dimensional reconstructions (*Figure 2*). Laboratory findings showed normal calcium levels with secondary hyperparathyroidism because of vitamin D insufficiency (25-OH-D: 10.2 ng/mL). The level of vitamins A and C was normal as were the coagulation assays.

These pseudo-tumoral forms of subperiosteal hematoma are more often described in young patients with severe hereditary neurological disorders (1), which are considered to cause delayed bone maturation and looseness of the connection between the periosteum and the underlying bone (2). In cases of minor trauma or unrecognized fracture, massive subperiosteal haemorrhage may then occur, causing progressive elevation of the abnormally loose periosteum.

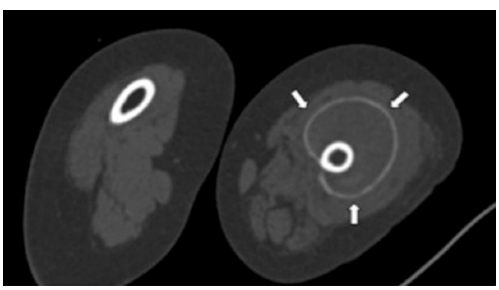

Figure 1 Axial computed tomography showing ossifying periosteum lifts the muscles off the cortex of the left femur, demonstrating subperiosteal stripping consistent with ossifying subperiosteal hemorrhage (arrows).

Figure 2 Three-dimensional computed tomography reconstructions confirming that the ectopic ossification is longitudinal, eccentrically placed, well circumscribed, and not completely encircling the shaft corresponding to ossifying subperiosteal hemorrhage.

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Footnote

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