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. 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.
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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

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