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Finger-Tip Lesion: Solitary Brown Tumor

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A 43-year-old woman presented with painless, progressive swelling in the tip of her left middle finger of 1-year duration. On clinical examination, it was a nontender soft tissue swelling involving the distal phalanx with no signs of inflammation [Fig. 1(a) and 1(b)]. She had diffuse bone pains for 4 years with history of renal stones in the past. Plain radiograph showed an expansile lytic lesion involving the distal phalanx of her left middle finger with marked cortical thinning [Fig. 2(a) and 2(b)]. Subperiosteal resorption was evident in other phalanges [Fig. 2(a) and 2(b)]. A skeletal survey did not reveal similar expansile lesions elsewhere. The radiological features were suggestive of hyperparathyroidism. Laboratory results are as follows: serum-corrected calcium, 12.1 mg/dL (8.8 to 10.2 mg/dL); serum phosphorus, 2.8 mg/dL (2.5 to 4.8 mg/dL); alkaline phosphatase, 312 IU/L (34 to 114 IU/L); serum creatinine, 1.0 mg/dL (0.5 to 1.2 mg/dL); and parathyroid hormone , 312 pg/mL (12 to 88 pg/mL). Biochemical evaluation was consistent with primary hyperparathyroidism. She had left inferior parathyroid adenoma by ultrasound and technetium sestamibi scan. Biopsy of the finger-tip lesion was not performed because the clinical, radiological, and biochemical features were suggestive of a brown tumor. This patient underwent successful parathyroid surgery with resolution of hypercalcemia. At 2-month follow-up, there was no marked change in the

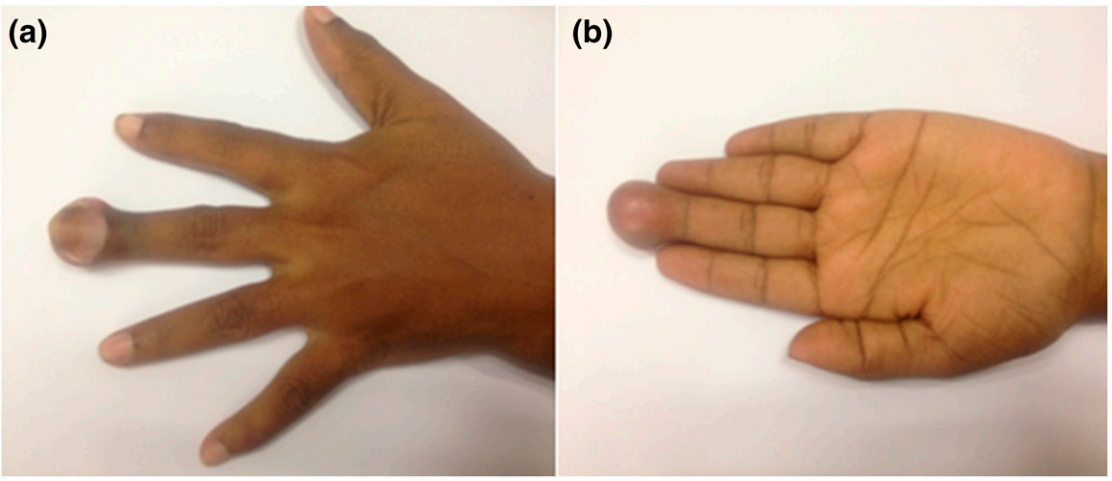

Figure 1. Swelling in the tip of the left middle finger. (a) Dorsal and (b) palmar view.

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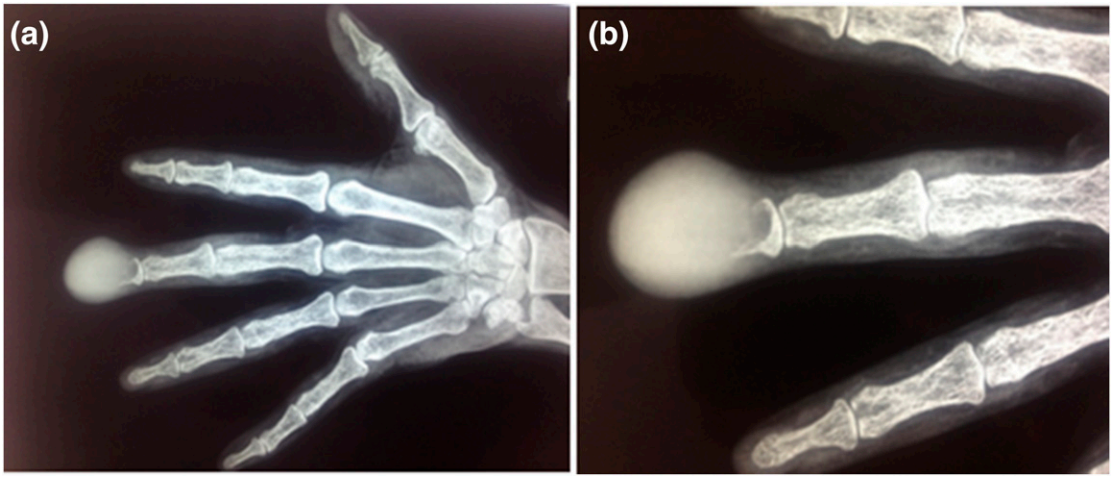

Figure 2. (a) Plain x-ray of the left hand showing an expansile lytic lesion in the distal phalanx of the middle finger and (b) magnified view of the lytic lesion.

finger-tip lesion. Since the patient was lost to follow-up, subsequent changes of the lesion are not known.

Brown tumors (osteitis fibrosa cystica) are seen in long-standing untreated hyperparathyroidism. They usually involve long bones and the jaw and manifest as swelling or fracture. Primary hyperparathyroidism presenting with an isolated brown tumor in the finger tip is rare. The differential diagnosis of chronic swelling in the finger tip includes epidermal inclusion cysts, intraosseous epidermoid cysts, enchondroma, tophaceous gout, glomus tumor, and, rarely, metastasis. Brown tumors in the finger tip are uncommon but should be considered as a possibility in appropriate clinical settings.

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