

## IMAGES IN CLINICAL MEDICINE

Lindsey R. Baden, M.D., *Editor*

## Subperiosteal Bone Resorption



Takafumi Taguchi, M.D., Ph.D.  
Yoshio Terada, M.D., Ph.D.

Kochi Medical School  
Kochi, Japan  
ttagu27k@axel.ocn.ne.jp

**A** 45-YEAR-OLD MAN WAS ADMITTED TO THE HOSPITAL WITH A 6-MONTH HISTORY OF ANOREXIA, FATIGUE, and thirst. Approximately 10 years earlier, he had been treated for urinary calculi. Laboratory evaluation showed a serum calcium level of 14.7 mg per deciliter (3.7 mmol per liter; normal range, 8.0 to 10.4 mg per deciliter [2.0 to 2.6 mmol per liter]) and a serum intact parathyroid hormone level of 3844.0 pg per milliliter (normal range, 10.3 to 65.9). Ultrasonography of the neck revealed a 2.2-cm solid mass posterior to the inferior aspect of the left lobe of the thyroid. Technetium-99m-labeled sestamibi scintigraphy showed abnormal uptake in the left parathyroid gland, corresponding in location to the ultrasonographic finding. Radiographs of the hand showed multiple sites of subperiosteal resorption involving the phalanges (arrowheads) and tuftal resorption (asterisks). The patient underwent surgical resection of the neck mass, and histopathological analysis confirmed the suspected diagnosis of primary hyperparathyroidism caused by parathyroid adenoma. After surgical resection, the parathyroid hormone levels quickly returned to normal. Multifocal subperiosteal bone resorption, which is generally considered to be specific for hyperparathyroidism, is not commonly seen today because of earlier diagnosis. Severe hungry bone syndrome developed postoperatively in this patient, requiring high doses of oral and intravenous calcium with 1,25-dihydroxyvitamin D for approximately 4 months to maintain calcium levels.

DOI: 10.1056/NEJMicm1308814

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