

## Letter to the Editor

Uncommon Ectopic Parathyroid Adenoma<sup>☆</sup>*Adenoma paratiroideo ectópico poco frecuente*

## To the Editor:

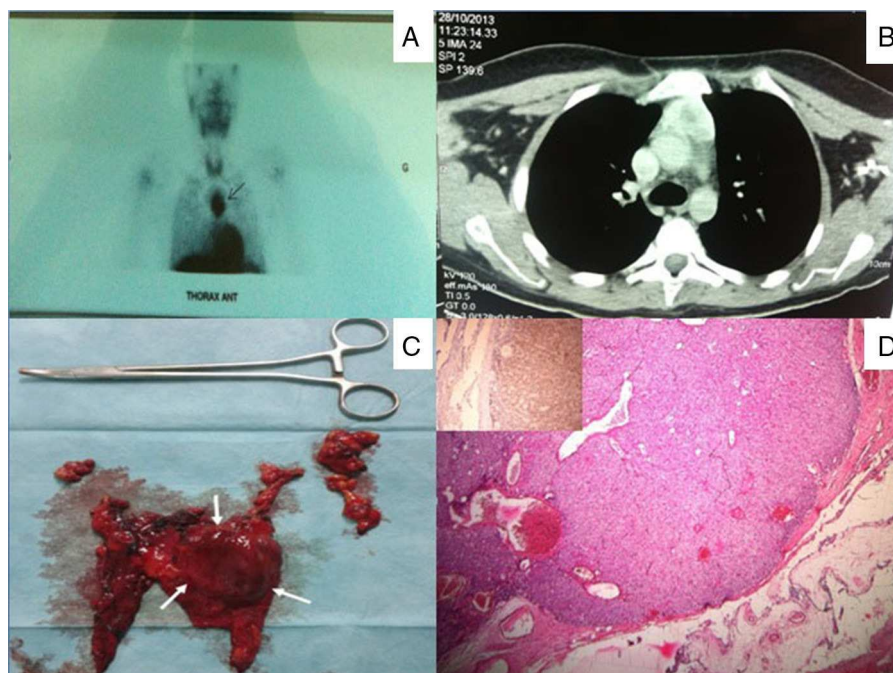
Primary hyperparathyroidism (PHPT) caused by ectopic parathyroid adenomas in the mediastinum is uncommon. The main indications for resection are glandular hyperfunction, complications from hypercalcemia, and young age of the patient.

A 20-year-old man was admitted due to several sudden pathologic fractures. Permanent tachycardia was found on clinical examination and standard X-ray revealed multiple fractures at varying stages, clear evidence of osteolysis and multiple bone tumors. Preoperative biochemistry results showed very high blood calcium: 170 mg/l (90–100 mg/l) and PTHi: 4000 pg/ml (15–65 pg/ml).

Technetium (<sup>99m</sup>Tc) sestamibi (MIBI) scintigraphy showed extensive uptake in the upper mediastinum (Fig. 1A). A computed tomography (CT) was performed for more accurate localization of the mass, which was determined to be in the area of the thymus in close contact with the aortic arch (Fig. 1B). Diagnosis was PHPT caused by a hyperfunctioning ectopic parathyroid mass in the mediastinum.

Median sternotomy revealed a tumor in the left lobe of the thymus that could be fully resected (Fig. 1C). To confirm the success of the resection, calcium and PTHi serum levels were monitored before and after surgery: levels fell gradually to 77 mg/l and 7.6 pg/ml, respectively, 3 days after the intervention. Low calcium blood levels, causing tachycardia, were detected in the postoperative period, and managed with intravenous administration of calcium.

Pathology examination determined that the lesion measured 5.5×4×4 cm and the histological diagnosis was parathyroid adenoma (Fig. 1D).



**Fig. 1.** (A) Preoperative <sup>99m</sup>Tc-MIBI scan showing a large area of increased uptake in the mediastinum. (B) Chest computed tomography showing a large mass in the area of the anterior thymus. (C) Postoperative image after complete thymectomy showing the parathyroid adenoma occupying almost all the left thymus lobe. (D) Postoperative histopathology examination showing parathyroid adenoma surrounded by normal thymus tissue. Immunostaining positive for parathyroid hormone (inset).

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Six months after surgery, the patient's serum calcium and PTHi had returned to normal.

## Discussion

Mediastinal ectopic parathyroid adenoma causes hyperparathyroidism in approximately 20% of cases. When the thymus descends into the chest in the 5th week of embryonic development, it is accompanied by the lower parathyroid glands, as they take up their normal position. Occasionally, however, they move to the chest, along with the thymus.<sup>1</sup>

Most patients with hyperparathyroidism are asymptomatic, but any symptoms that do appear are generally caused by hypercalcemia, and include nausea, vomiting, excessive thirst, constipation, polyuria, lethargy, and cardiac anomalies. Kidney stones, bone resorption and pathologic fractures may also occur. Severity of symptoms correlates with the size of the hyperfunctioning adenoma.<sup>2</sup> When PHPT is suspected, preoperative localization of the tumor by imaging studies is essential for planning the surgical approach and allowing the surgeon to select the most appropriate technique. Ectopic parathyroid adenomas of less than 10 mm in diameter are best detected with <sup>99m</sup>Tc-MIBI scintigraphy.<sup>3</sup> Cervical ultrasound, CT and magnetic resonance imaging are used to determine the exact anatomical site of the mass.

Conventional approaches for a parathyroid adenoma located deep in the mediastinum are median sternotomy, manubriotomy or thoracotomy.<sup>4</sup> Thanks to recent advances, however, video-assisted thoracoscopy is now more widely used for the resection of mediastinal ectopic parathyroid adenomas.

Large parathyroid adenomas are exceptional, and masses weighing more than 70 g have occasionally been reported.<sup>5</sup> In our case, the adenoma measured 5.5 × 4 × 4 cm, and weighed 95 g, making it one of the largest masses described in the literature, the largest being 145 g.

## Conflict of Interest

The authors state that they had no conflict of interests.

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## Intraparenchymal Pulmonary Lipoma Clinically Mimicking Malignant Neoplasm<sup>☆</sup>



### *Lipoma pulmonar intraparenquimatoso con comportamiento clínico de neoplasia maligna*

To the Editor:

Lipomas are the most common benign soft tissue tumor found in humans, and occur in approximately 1% of the population. They are generally subcutaneous, and appear only rarely in the viscera.<sup>1</sup> Pulmonary lipomas are uncommon, most being endobronchial lesions accounting for 0.15%–0.5% of lung tumors. Pulmonary lipomas within the peripheral parenchyma are exceedingly rare.<sup>2,3</sup> We report such a case.

A 58-year-old man presented with pain in the left hemithorax radiating to the left shoulder and arm. Chest X-ray revealed an undefined lesion in the upper left lobe of the lung. Multislice computed tomography showed a rounded peripheral intraparenchymal pulmonary nodule measuring 53×54 mm, located in the periphery of the upper left lobe lingula. The lesion was in contact with the diaphragm, the pericardium and the parietal pleura (Fig. 1).

Thoracotomy was performed and intraoperative inspection revealed a tumor in the lingula, adhered to the diaphragm and the pericardium. No hilar or mediastinal lymphadenopathies were

found. Unilateral left upper lobectomy was performed and the sample was sent for pathology analysis.

The gross description was a soft, pale brown, round tumor in the lingula, with defined borders, measuring 35×25×25 mm.



**Fig. 1.** Multislice computed tomography showing round, homogeneous, intraparenchymal pulmonary nodule, located in the periphery of the left pulmonary lingula, in contact with the pericardium and the parietal pleura.

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