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## INTRODUCTION

Primary hyperparathyroidism (PHPT) is frequently diagnosed as an incidental finding of hypercalcemia. Overt bone disease (osteitis fibrosa cystica or brown tumor), with history of pathologic fractures is a rare presentation.

## CASE PRESENTATION

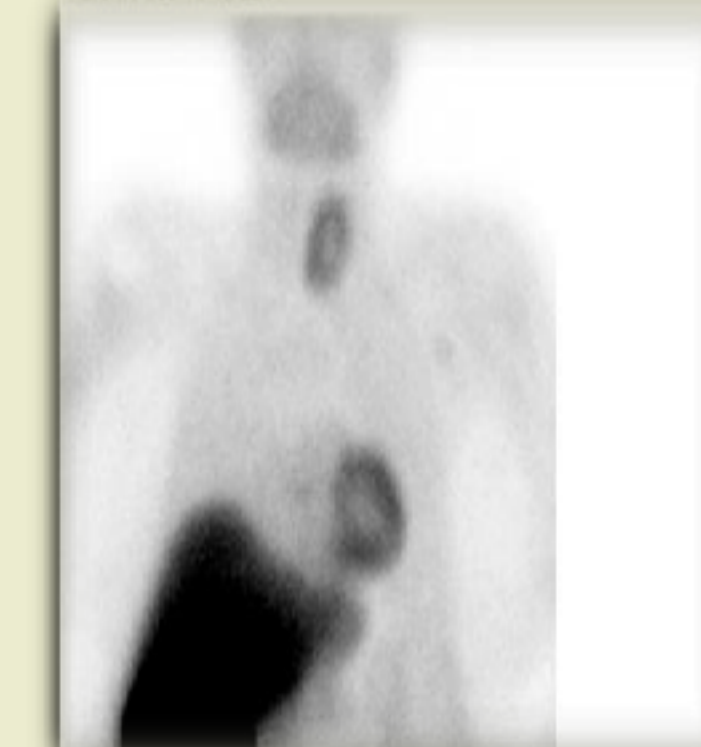
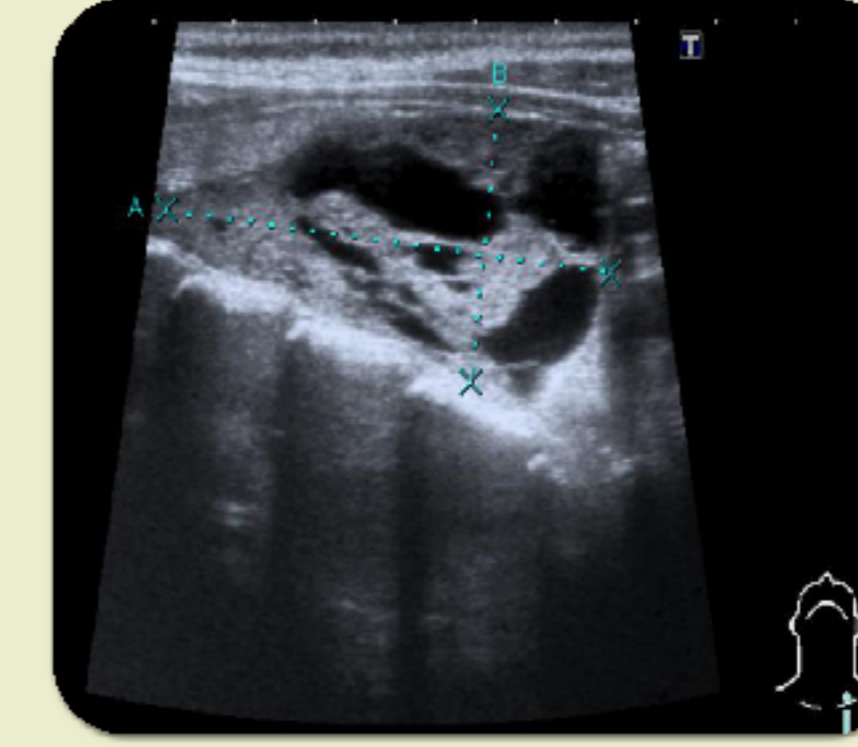
### 48-year-old woman

#### Medical history

- multiple bone fractures in the last six years - left patella and both wrists
- Surgery, four years before, to lytic lesion of the right humerus, assumed as aneurysmal bone cyst -> last follow-up CT, revealed recurrence of lytic lesion and she was propose to shoulder arthroplasty

#### Admitted with

- pain in the right thigh after a trivial fall
- generalized weakness and lethargy over the last 2 years



#### X-rays revealed:

- pathologic fracture of the right femur
- multiple osteolytic lesions (right humerus, right femur, both shoulder blades and iliac bones)
- subperiosteal erosions in the distal phalanges
- old fractures in the ribs

Femur fracture was managed with osteosynthesis and humeral biopsy documented multiple giant cells consistent with brown tumor of PHPT.

Bone scan showed increased uptakes over right humerus, right femur and tibiae.

#### Analysis revealed severe PHPT

Serum calcium: 3,49mmol/L  
Phosphorus: 0,53mmol/L  
PTH: 1435pg/mL

#### Ultrasound

- mixed texture lesion in the left superior parathyroid (5,8x3,9x2,4cm)

#### Sestamibi scanning

confirmed a left parathyroid adenoma, with a necrotic centre and bone uptakes coincident with previous bone scan.

- Considering patient's age and high level of PTH, metastatic disease and hereditary cancer syndromes were excluded.
- Treatment was initiated with hydration and zoledronic acid and parathyroidectomy was performed. Hungry bone syndrome developed following surgery and was necessary treatment with calcium carbonate and alfacalcidol.
- Histopathology confirmed the diagnosis of parathyroid adenoma.

## CONCLUSION

Pathological fractures in young adults should always be investigated. A high index of suspicion is necessary to diagnose this unusual presentation of PHPT.

#### Bibliography:

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