

# Rapid Improvement of Osteitis Fibrosa Cystica Following Parathyroidectomy

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## Image Legend

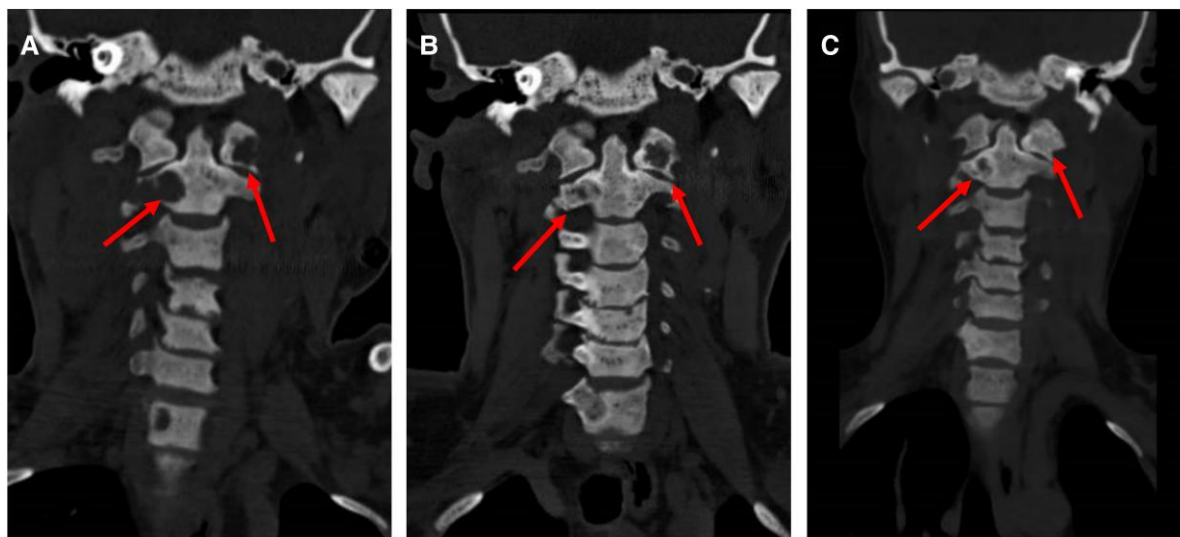
A 50-year-old woman with end-stage renal disease who had been on hemodialysis for 2 years suffered from longstanding tertiary hyperparathyroidism despite medical treatment with a phosphate binder, vitamin D analog, and calcimimetic. Following a midshaft femoral fracture after minimal trauma, diffuse osteitis fibrosa cystica was diagnosed, including multiple cervical spine lytic lesions (Fig. 1A). Histopathological analysis of the femoral fragments was consistent with a Brown tumor. Subtotal parathyroidectomy (3.5 glands) was performed with biochemical cure. As early as 7 weeks later, a remarkable improvement of the vertebral lytic lesions was seen, with a significant sclerosing component filling the bone cysts (Fig. 1B); further radiologic improvement was documented 2 months afterwards (Fig. 1C). In between the parathyroidectomy and follow-up

radiologic assessment, the patient underwent a successful renal transplantation.

There are few data describing the timeline of skeletal recovery following parathyroidectomy for osteitis cystica. Bone mineral density improvement has been reported in patients with renal secondary hyperparathyroidism as early as 6 months [1], whereas the Brown tumor healing timeline in patients with secondary and tertiary hyperparathyroidism is largely unknown [2]. The anticipated skeletal recovery timing is of utmost clinical importance, especially in patients who are candidates for salvage orthopedic surgery that might be avoided in case of rapid improvement. A systematic evaluation of this topic is needed.

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**Figure 1.** A cervical spine computed tomography scan showing multiple lytic lesions (arrows) before (A) subtotal parathyroidectomy and remarkable improvement (B) 7 and (C) 15 weeks after surgery.

## Disclosures

The authors have nothing to disclose.

## Informed Patient Consent for Publication

Informed patient consent was signed before publication. This clinical image publication was approved by the Sheba Medical Center institutional review board.

## References

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2. Sandoval MAS. Radiographical appearance of osteitis fibrosa cystica in primary hyperparathyroidism before and after parathyroidectomy. *BMJ Case Rep.* 2013; 2013:bcr2012008086.