



Concurrent lesions in right maxilla and mandible due to right parathyroid carcinoma – A case report

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Introduction

Bony lesions, as a part of a metabolic bone disorder, can be caused by the altered levels of parathyroid hormone. The elevated levels of parathyroid hormone lead to osteoclastic activity which results in destruction of bones with areas of irregular bone resorption which further get replaced by fibrous cells. Accumulation of red blood cells in these areas imparts a characteristic reddish/brown hue to the lesion and thus known as “brown-tumour” (1). Facial involvement is exceptionally rare since the disease usually involves long bones. We report a very rare case of concomitant involvement of right maxilla and right mandible brown tumour with parathyroid carcinoma.

Case report

A 35-years-old female presented to the Department of Otolaryngology, Himalayan Institute of Medical Sciences, Swami Rama Himalayan University, with chief complaint of right sided painless facial swelling for 5 years. The physical examination showed asymmetry of face with stony hard swelling involving whole of the right maxilla and right mandible. On oral examination, there was widening of right upper alveolus with missing molars and premolars. Lesion on palate was not found to have crossed the midline. The lesion also involved the right lower alveolus and crossed the midline. On external palpation, the lesions were non-tender, non-pulsatile, and immobile with no areas of bony erosions. Patient’s past medical and family history were not contributory.



Figure 1 shows right facial swelling involving maxilla and mandible

Investigations

X-ray Skull showed osteolytic lesions involving right maxilla and mandible. Computed tomography of nose with paranasal sinuses (CT-PNS) was done to know the extent of disease involvement. Ultrasonography neck showed a well defined lobulated hypoechoic lesion noted postero-inferior to right lobe of thyroid measuring 1.5cm x 0.9 cm.



Figure 2: Images of CT-PNS

Sestamibi parathyroid scan showed a region of increased tracer uptake in relation to the right lobe of thyroid gland.

Biochemical investigations showed: Serum Calcium 12.1 mg/dL, iPTH (Parathormone) 572.53 pg/dL, Creatinine 0.7mg/dL. Haemoglobin 10 gm%, Spot Urine Calcium 13.9 mg/dL, Spot Urine Creatinine 24.1 mg/dL.

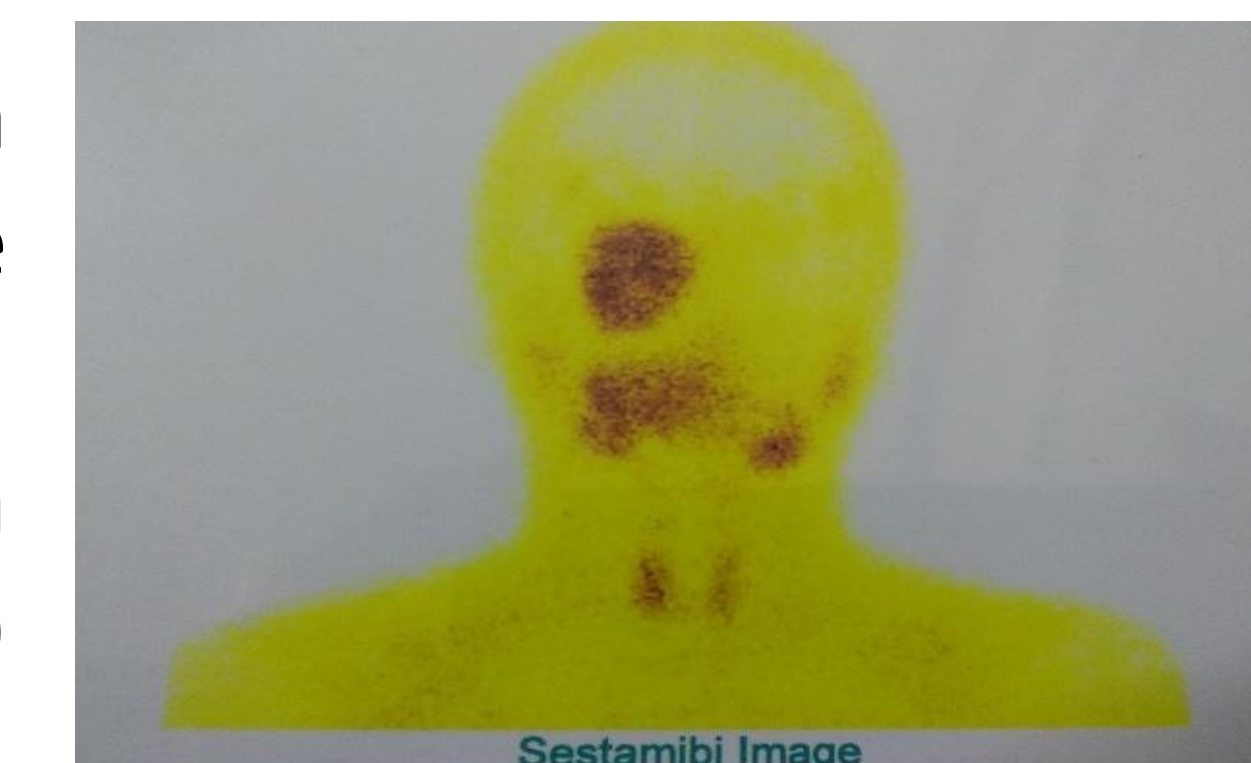


Figure 3: Sestamibi parathyroid scan

Discussion

The concomitant involvement of maxilla and mandible associated with hyperparathyroidism in parathyroid carcinoma is a very rare occurrence (2). Patient underwent right hemithyroidectomy and right parathyroidectomy. Post-operative day 2nd serum calcium was 8.8 mg/dL. Post-operative calcium supplementation was done to combat post-operative hypocalcaemia. Post-operative histopathological examination revealed parathyroid carcinoma. The brown tumour mainly affects the long bones, ribs and pelvis. The disease occurs commonly in adults and more in female (M:F=1:3) (3). Radiological similarities were seen as reported by other authors (4). The current patient had limited education with less disease awareness and did not seek early medical consultation. The patient presented late after 5 years of disease progression with severe facial disfigurement.



Figure 4 shows intra-operative lesion of parathyroid carcinoma and post-operative specimen of right thyroid gland and parathyroid gland

Conclusion

A comprehensive articulation of clinical, radiological and biochemical investigation led to the final diagnosis of brown tumour of maxilla & mandible due to parathyroid carcinoma which is a rare occurrence. Advanced cases like these must be dealt with good clinical acumen and comprehensive search for the underlying disease.

References

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