

BROWN TUMOURS ASSOCIATED WITH PRIMARY HYPERPARATHYROIDISM

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Conclusion

- Brown tumours range from clinically asymptomatic to cosmetically disfiguring and functional deformity. They represent a severe and chronic disease state of primary hyperparathyroidism.
- These tumours exhibit a tendency for spontaneous resolution following parathyroid surgery. Our study contributes valuable insights facilitating improved understanding of this uncommon condition.

Introduction

- Brown tumours- abnormal lesions of bone caused due to persistently high parathyroid hormone secretion in primary hyperparathyroidism. Occur in 3-4% of cases of PHPT and usually a late complication.
- The commonest site- maxillofacial region is the mandible but it may present in maxilla, ribs, clavicle or pelvic bones.
- Asymptomatic to disfiguring bony swelling or bone fractures.
- They are rare tumours and the available literature is very sparse. We have done a retrospective observational study of 40 patients with brown tumours in primary hyperparathyroidism.



Materials and Methods

- 468 patients of PHPT, between 2006-2024 and 40 patients were included in the study with Brown tumour.
- Biochemical work-up- serum calcium, serum iPTH, serum phosphorous, alkaline phosphatase, renal function tests were done to confirm diagnosis of PHPT.
- Radiology-included an ultrasound of the neck and a Tc99m Sestamibi scan for localizing the parathyroid adenoma. Second line investigations - as per requirement.
- Surgical details were registered and post-operative complications was and Follow up- for brown tumours and parathyroid adenoma for up to 1 year

Results

- There was a female predilection (68.9%).
- Adenomas were localized on Tc99m Sestamibi scan and confirmed on ultrasonography
 - Focused parathyroidectomy was performed in 90% of cases, while 10% required neck exploration.
 - Notably, 90% of patients experienced spontaneous resolution of the mandibular lesion, while 10% required surgical intervention such as curettage or resection.
 - All patients had normocalcemia postoperatively with no post operative complications.

Mean	Brown tumours	PHPT registry
iPTH	907.35 pg/ml	752 pg/ml
Calcium	12.6 mg/dl	11.5 mg/dl
ALP	836.24 mg/dl	653 mg/dl



Median	Brown tumour	PHPT
Size	2.5cm	1cm
Weight	3.2g	1.7g
Associated symptoms with Brown tumour	Brown tumour (our study)	Other study Indian registry 2018
Gastrointestinal symptoms	10%	21%
Muscle weakness	41%	58%
Renal involvement	17%	31%
Bone related (other than brown tumours)	93%	26-56%

References

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