ORIGINAL RESEARCH PAPER

Endocrinology

A CASE OF ECTOPIC PARATHYROID ADENOMA PRESENTING AS JAW TUMOUR.

KEY WORDS: Ectopic parathyroid adenoma, juvenile Paget's disease.

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ABSTRACT

Ectopic parathyroid adenomas are rarely seen. Parathyroid adenomas presenting as brown tumor juvenile Paget's disease is unusual. Here we report a case of 22 year old male presenting with jaw tumor referred from dental outpatient department (OPD) in view of multiple lytic lesions in mandible in orthopantomogram (OPG) X-ray. On further questioning he had other symptoms of hypercalcemia like polyuria, polydipsia, constipation, presence of medullary nephrocalcinosis in USG abdomen . On further evaluation he had blood reports suggestive of primary hyperparathyroidism and parathyroid scintigraphy suggestive of parathyroid adenoma at ectopic site at suprasternal notch.

INTRODUCTION:

Primary hyperthyroidism (PHPT) is characterized by excessive production of parathyroid hormone leading to high levels of calcium and lower levels of phosphate and vitamin D levels. Hyperparathyroidism is classified into primary, secondary and tertiary. The most common cause of primary hyperparathyroidism are parathyroid hyperplasia and parathyroid adenoma. Secondary hyperparathyroidism is due to hypocalcemia, vitamin D deficiency and secondary to chronic renal insufficiency which stimulates the production of parathormone (PTH). Tertiary hyper parathyroidism is associated with chronic kidney disease leading to autonomous functioning of the gland [1]. Brown tumour is one of the manifestation of hyper parathyroidism and part of metabolic bone disease recognized as osteitis fibrosa, cystica generalisata or Recklinghausen's disease of bone [2,6]. Brown tumour as first presentation of PHPT is extremely rare [3]. The reported prevalence of browns tumour is 0.1% with male to female ratio of 1:3 with disease more common in persons above 50 years [5].

Ectopic parathyroid adenomas have an incidence of around 25%. Ectopic locations of the parathyroid gland are related to the embryologic migratory pathway as it descends to target location in adulthood. Multiple imaging studies are needed for accurate localization to guide surgery and reduce the rate of recurrence.

Case report :

A 22 year old male came with complaints of pain and swelling in right jaw since 2 months, he also has history of increased frequency of micturition increased thirst , constipation and complaints of pain abdomen since 1 month.

Past history: H/o fracture of multiple facial bones and humerus with trivial trauma 4 years back.

On examination: Swelling seen over left mandible. Pulse rate-72 bpm, Blood pressure-120/70mmHg,

Investigation	Pre-operative	Post operative
S. Calcium	13.5 gm/dl	9.1 gm/dl
S. PTH	360 pg/dl	54 pg/dl
S. Phosphorus	2 mg/dl	3 mg/dl
Vitamin D	11.76	97 (post supplements)

Investigations:

CBP, RFT, LFT : Normal

S. Alkaline phosphatase-532U/L

ECG : Sinus rhythm, HR:73, QT Interval: 280MS, Corrected QT: 309MS, 2DEcho: Normal

Ct head : Multiple lytic lesions seen in whole of calvarium and mandible suggestive of Juvenile Pagets disease.

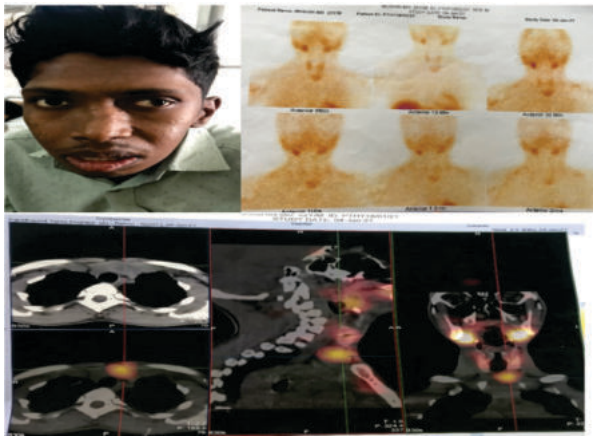
Biopsy of mandibular lesion suggestive of Juvenile Paget's disease (Browns tumor) .

Usg abdomen: Right hypertrophied kidney with medullary nephrocalcinosis.

Usg neck: Hyperechoic lesion noted in left lobe of thyroid TIRADS-2

Sestamibi scan: Left parathyroid adenoma at suprasternal notch (paratracheal)

Patient was posted for open parathyroid adenoma excision under general anesthesia 4*2cm oval cystic lesion noted in left paratracheal region and lower pole abutting thymus. Transverse skin incision 5 cm is given at finger width above the suprasternal notch. Left parathyroid adenoma is dissected from surrounding tissue and bilateral paratracheal lymphadenectomy done, drain placed and neck closed in layers.



DISCUSSION:

Browns tumor is non-neoplastic giant cell tumor due to increased parathormone levels in blood which leads to bone resorption. PTH plays a key role in calcium and phosphorus balance . Incidence of browns tumor is 4.5% in primary hyperparathyroidism and 1.5% in secondary hyperparathyroidism [1].

Browns tumor is more commonly found in ribs, clavicles , pelvis and facial bones where mandible is more commonly involved. Biopsy of Browns tumor reveals multinucleated giant cells in the background of spindle cell proliferation.

Treatment of brown tumor is correction of underlying disorder which is excision of the parathyroid adenoma leading to normal PTH and calcium levels [5]. Surgical

excision is only indicated in large lesion causing disfigurement.

CONCLUSION:

Brown tumors are a challenge to diagnosis and should be considered in the evaluation of hyperparathyroidism. Correlation between clinical, histological aspects and imaging findings were essential in establishing an diagnosis.

Consent: Obtained from patient

Conflicts of interest: None

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