Primary Hyperparathyroidism Presenting as a Brown Tumor of Mandible in an Adolescent Girl - An Unusual presentation with Challenges and Outcome

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INTRODUCTION
Brown tumor is a rare non-neoplastic focal giant cell lesion resulting due to increase osteolytic activity by excess of parathormone in cortical bone which is replaced by fibrovascular tissue, giant cells with hemorrhages and hemosiderin giving the brown color.

It is a late stage bone sequelae of long-standing hyperparathyroidism (HPT) resulting in rare metabolic bone disease, Osteitis fibrosa cystica.

HPT may occur in primary, secondary and tertiary forms. Parathyroid adenomas are the commonest cause in about 85% cases of Primary HPT.

CASE PRESENTATION
We present a referred case of 15-year-old girl with highly aggressive mandibular mass 4.0x3.0cm size creating swallowing difficulties, oral bleeding episodes, and anterior mandibular erosion with dislodgement of nine teeth, anterior canines, incisors, and premolars.

The thorough clinical, biochemical, histopathology and comprehensive radiological assessment reveal left upper parathyroid adenoma causing a hyperparathyroid state and its long-standing existence led to “Brown tumor” of mandible.

Serum Parathormone 516.00 pg/ml (N:11-67)
Serum Calcium 12.5 mg/dl (N:8.4-10.2)
Serum Phosphorus 2.39 mg/dl (N:3.0- 5.6)
Alkaline Phosphatase 239 u/l

Technetium-MIBI Dual phase Parathyroid scan showed left upper parathyroid adenoma

MRI craniofacial region showed non-infiltrative expansile soft tissue mass with anterior mandibular bone loss, teeth dislodgement and no other craniofacial involvement seen.

Histopathology of specimen revealed predominant rich giant cell lesions with hemosiderin laden macrophages, fibroblastic stroma.

CONCLUSION
Such complications are rarely seen in presence of good medical standards and provision of advanced analytic facilities but still cases are encountered in underdeveloped countries with poor health facilities. The desirable aesthetic outcomes can only be produced with great expertise and can be achieved with biomaterial implants to replace, reconstruct and/or augment the tissue.

REFERENCES