An aggressive central giant cell granuloma of the mandible: A case report

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Abstract
A case of aggressive central giant cell granuloma of the mandible; differential diagnosis and management options together with literature review are discussed.
Key word: central giant cell granuloma, management of an aggressive central giant cell granuloma, mandibular tumor.

Introduction

Central giant cell granuloma (CGCG) is described as a benign lesion affecting the mandible and maxilla that consists of a massive fibrohistiocytic proliferation with numerous heavily hemosiderin-laden multinucleated giant cells. [1]. Although it is a benign disease, it can also be locally destructive [2].

CGCG is a vascular lesion that shares many features with the aneurysmal bone cyst. Differentiation from the latter can also be difficult histologically. However, the aneurysmal bone cyst is characteristically composed of honeycomb blood-filled spaces with a lining of flat non-endothelial cells [3]. Also Brown tumor of hyperparathyroidism has a histological similarity to CGCG, therefore, all patients with suspected CGCG, should have serum calcium, phosphate and alkaline phosphatase levels evaluated, to exclude the possibility of hyperparathyroidism [4]. Since there is no histological difference between brown tumors and CGCGs, every histologically confirmed giant-cell lesion should be regarded as a potential brown tumor until serum tests show normal PTH and calcium levels [5].

Two types of hyperparathyroidism are known; primary and secondary hyperparathyroidism. Primary hyperparathyroidism is caused by a direct release of relex of parathyroid hormone (PTH) from an adenoma or a glandular hyperplasia. Increased PTH levels can cause an imbalance between osteoclastic-osteoblastic homeostasis and calcium-phosphorus regulation, which can lead to bone resorption with fibrous replacement of the marrow and thinning of the cortex. The secondary hyperparathyroidism is usually related to an imbalance of calcium and phosphorous metabolism and is often seen in chronic renal failure.

We present a case of CGCG in a Chadian male *literature review.*

Case Report

A 26-year-old Chadian male, presented to the Oral and Maxillofacial Surgery outpatient clinic, King Abdulaziz University Hospital (KAUH), Jeddah, Saudi Arabia, with a chief complaint of an expanding large mandibular mass of 2 years duration. The mass enlarged slowly, without pain or numbness or other symptoms.

Clinical examination revealed a large mandibular mass extending from the right condyle to the left molar area. The patient could not open his mouth widely because of the mass that encroached on the floor of the mouth, (Fig. 1)

Intraorally, the lesion was slightly soft, and easily compressed. The swelling appeared firm and non-tender; the overlying mucosa appeared stretched, and the buccal and lingual mandibular cortex were expanding and showed an egg shell cracking. Indentation of the upper molar teeth on the lower right enlarged gingival, with missing lower right posterior teeth were obvious. The lower right central incisor appeared floating, and the rest of the mandibular teeth appeared loose.

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