www.sada.co.za / SADJ Vol. 79 No.5

Beneath the surface: Unusual radiological findings in a peripheral ossifying fibroma

SADJ JUNE 2024, Vol. 79 No.5 P288-289

S Rajbaran-Singh[1], N Nzima Chiloane[2], L Masilo[3]

A 26-year-old asymptomatic and otherwise healthy female patient presented with a pedunculated, non-tender tumour of rubbery firm consistency measuring 66x70x59mm on the anterior region of the maxilla impairing normal mastication and speech. The patient reported the tumour to be of long duration.

Diagnostic imaging demonstrated an expansile soft tissue shadow associated with and displacing the right central and lateral incisors (Figure 2). Cone-beam computed tomography revealed mild maxillary superficial cortical erosion in the anterior maxilla with solid, linear and scattered foci of radiopacity evident intralesionally. Histopathological examination of the excised tumour, supported by radiological interpretation, confirmed microscopic features of a giant peripheral ossifying fibroma with a myxoid component.

Fig.1

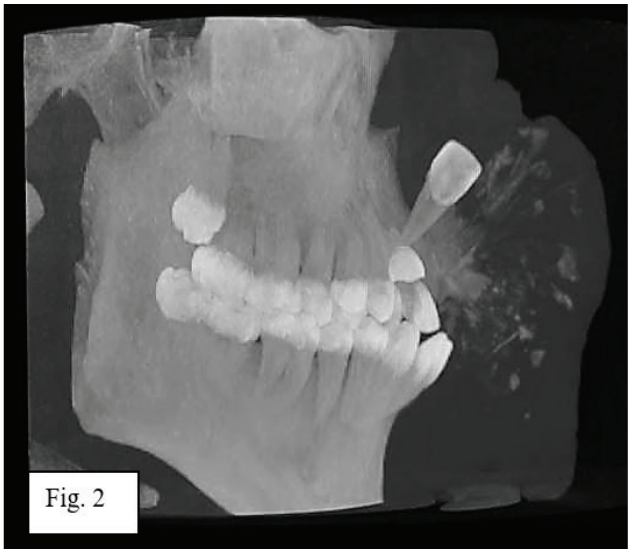
Fig. 2

Authors' information
1. Sandeepa Rajbaran Singh, MSc.Odont, Dip Odont, BChD, Dip HRM, School of Dentistry, Sefako Makgatho Health Sciences University, Ga-Rankuwa, Pretoria, South Africa. ORCID: 0000-0002-7313-1365
2. Nonhlanhla Nzima Chiloane, MDS, BDS, Fellowship, Health Sciences Education, School of Dentistry, Sefako Makgatho Health Sciences University, Ga-Rankuwa, Pretoria, South Africa. ORCID: 0000-0002-8200-1351
3. Letlhogonolo Masilo, MDent, BDS, BDT, School of Dentistry, Sefako Makgatho Health Sciences University, Ga-Rankuwa, Pretoria, South Africa. ORCID: 0000-0003-3526-9555

Corresponding author
Name: Sandeepa Rajbaran Singh
Email: Sandeepa.singh@smu.ac.za
Tel: 012 521 4902

Keywords
Peripheral ossifying fibroma, calcification, bone, cone-beam computed tomography

Peripheral ossifying fibromas are benign reactive lesions arising from mesenchymal gingival tissue in response to diverse inflammatory conditions that include, but are not limited to, plaque, calculus, orthodontic appliances, ill-fitting prosthesis and restorations.[1] Dystrophic calcification, cementum-like material and the presence of immature and mature bone within connective tissue histologically characterise the lesion.[2] The lesion most commonly occurs in female patients and demonstrates a predilection for the anterior maxillary gingiva in association with the interdental papillae of the incisor and canine teeth.[2] The age range for presentation appears to be wider than that of the first two decades of life as classically reported, with cases being documented in newborns and patients in the seventh decade of life.[1,2,3] Lesions most often demonstrate a nodular, pedunculated or sessile appearance that justifies clinical differential diagnoses of other gingival nodular lesions such as pyogenic granuloma and peripheral giant cell granuloma. Diagnostic imaging may aid in refining the diagnosis by demonstrating the presence of focal or diffuse radiopacity within the soft-tissue lesion.

While peripheral ossifying fibromas are not uncommon, this case demonstrates several less frequently evidenced features. Firstly, the dimensions of this lesion exceed those most frequently reported in the literature and make this case additive to the limited proportion of peripheral ossifying fibromas described as large, atypical or gigantiform.[1,2,4,5] Secondly, cone-beam computed tomography demonstrated localised superficial erosion of the proximal maxillary alveolar bone with the displacement of the right central and lateral incisors. Intralesional soft tissue shadows demonstrated significant amounts of radiopaque material arranged in a solid mass with band-like extensions and scattered foci. There is marked displacement of the maxillary right incisors. Bilaterally the maxillary canines demonstrate widened periodontal ligament spaces. Radiographic findings within peripheral ossifying fibromas are infrequent and have been cited to occur in less than 10% of lesions.[2] The significant amount and appearance of mineralisation evident radiographically, in this case, may be attributed to the maturation of the lesion and correlates to a history of long duration. This case highlights for the clinician the exuberant mineralisation that may uncommonly be evident radiographically in peripheral ossifying fibromas.

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