

Davetli Katılımcı Sunumu

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'Fibro-osseous lesions' is a histopathological term and phenomenon. It is composed of three elements, varying proportions of osteoid and/or cementoid deposits within a fibrous stroma. The lesions today which exhibit these are fibrous dysplasia, osseous dysplasia and ossifying fibroma. Although these and their earlier synonyms were recognised by the first edition of the World Health Organisation's (WHO) 'Histological typing of odontogenic tumours, jaw cysts and allied lesions' in 1971, they have continued to exhibit changes both in classification and nomenclature right down to the present day.¹ The 'benign cementoblastoma' was quickly excluded from the FOL group and exists today simply as 'cementoblastoma,' the 'benign' adjective found unnecessary as there was no malignant variant. This lesion had earlier been considered rare up until 1992, when a case series of 4 cases was reported until then the largest case series.² Since then much larger case series have been reported indicating that this lesion is perhaps more common than once thought.

Fibrous Dysplasia

Fibrous Dysplasia (FD) affects 1:30,000 of which about 94% are monostotic and 6% are polyostotic. The latter are often diagnosed early in childhood by regular pediatric checkups. The prevalence of monostotic cases on the other hand may be actually higher since almost all reported cases are accompanied by swelling and/or pain and very few discovered as incidental findings in comparison to many other jaw lesions. Although patients may be aware of them for up to 5 years, they do not seek professional assistance until they cause symptoms, usually swelling that produces an obvious asymmetry, and pain. The failure of the dentists to observe the lesions during this period of patient awareness, may be due to their poorly-defined margins on panoramic radiographs. Furthermore, many monostotic cases affecting the jaws 'burnout' (become inactive) in early adulthood without causing observable symptoms. Some do become reactivated by a life event, such as pregnancy. The still occasionally encountered association in the literature of malignant transformation in FD of the face and jaws occurring in 1% to 5% of all cases is now many decades old. It is no longer justified as it refers back to the days when FD of the face was treated by radiotherapy. Having said that, recently a few cases of malignant transformation in FD of the face and jaws has been reported in a few polyostotic cases in a very large Chinese case series. That report did not reveal as to whether any of these cases had been treated earlier by radiotherapy.

Distinguishing FD from Paget disease and from osteomyelitis is a traditionally-taught task even although Paget disease has experienced a marked decline in prevalence globally; the reasons for this are still uncertain. FD is unilateral whereas Paget disease is generally bilateral. FD obliterates or substantially obliterates the maxillary sinus lumen, whereas Paget disease generally spares the sinus. Mandibular cases of FD need to be distinguished from osteomyelitis as both involve both alveolar and basal processes, thereby enhancing the mandibular canal's outline.

Cherubism was considered to be familial fibrous dysplasia until two decades ago. This lesion is now a giant cell lesion, which presents classically as bilateral multilocular radiolucencies especially in the mandible with frequently substantial expansion, giving rise to the swollen cheeks of cherubs in renaissance art. It also is accompanied by destruction of tooth germs and displacement of formed teeth. When it becomes inactive it regresses to normal lamellar bone by way of woven bone. The latter appears similar to the osteoid bone observed in FD cases, hence its earlier misnaming. Both FD and Cherubism do have one thing in common, in that no treatment is necessary other than for aesthetic reasons. The next FOL, the ossifying fibroma which is a neoplasm, requires surgical ablation.

Ossifying fibroma

Ossifying fibroma (OF) classically presents radiologically as well-defined radiopacities. Most are separated from normal adjacent bone by a radiolucent capsule space, which may enhance their surgical ablation, often akin to enucleation. Nevertheless, some recur. The juvenile OF subsets do not have this space which may contribute to their reputed higher recurrence rates. It is especially likely to happen as these juvenile cases (obviously occurring in children) as the absence of a clearly obvious margin to guide their complete ablation, may cause the understandably reluctant surgeon to remove more of the child patient's face than necessary. The more common conventional OF has a predilection for females. The differential diagnosis of the conventional OF includes osseous dysplasia, complex odontoma, cementoblastoma and calcifying epithelial odontogenic tumour (CEOT). Osseous dysplasia will be addressed in the next section. Cementoblastomas are readily distinguished radiologically from almost all other jaw lesions, because they not only cause root resorption, but they are fused directly to the root. Although idiopathic osteosclerosis (dense bone islands) may be distinguished from condensing sclerosis by virtue of the latter's association with a non-vital tooth, it can on occasion be difficult to distinguish from a OF, especially when large, by the Mach-band effect. Cone-beam computed tomography (CBCT) can assist in such situations revealing the continuity of the sclerosis with the trabeculae of the adjacent normal bone. Early stage OFs are radiolucent. This and their buccolingual expansion are virtually indistinguishable from those of the ameloblastoma.

The clinician should be aware of the association between OF and hyperparathyroidism-jaw-tumour syndrome (HPT-JT) as this may be caused by a secreting carcinoma and may provoke a hypercalcaemic crisis.³

Osseous dysplasias

Osseous dysplasia (OD) presents as a number of clinical entities. These are florid OD (FOD), which affects more than one sextant; focal OD (FocOD), which is represented by one or a number of juxtaposed ODs confined to a single sextant; periapical OD (POD), which is classically confined to the anterior mandibular sextant; and expanding OD (EOD). Some of the lesions present or first present as non-expansive radiolucencies – like simple bone cysts. FODs and FocODs present overwhelmingly in middle-to-old aged females of East Asian and of Sub-Saharan African origin, the third (POD) to young adult females of European origin, whereas EOD, the rarest of all four, is world-wide. Although, the first three generally cause the patient no serious outcomes, it was advised to ensure the vitality of the adjacent teeth be preserved and, if this is compromised, a referral made to an endodontist for optimal treatment. These avoid infection of the underlying OD and preserve the dentition. Extensive OD involvement of the edentulous alveolus both enhances the risk of their infection and also contraindicates implants. The EOD was originally determined to be familial, hence its earlier name of familial gigantiform cementoma (FGC). Noffke et al. questioned

the appropriateness of the continued use of terms “cementum,” and “gigantiform,” suggesting instead EOD.⁴ Some EODs are not familial and appear sporadically in very young patients. The aggressiveness of such multiple lesions in both jaws has already resulted in the death of a young Asian boy. Another similar Asian case is reported in reference 5. Professor Gunhan and the presenter discussed the appropriateness of the term ‘dysplasia’ for such young cases. The behavior of the lesions affecting the Asian boy and girl (in reference 5) is neoplastic.

Concluding remarks on fibro-osseous lesions

The role of the radiologist is central to the definitive diagnosis of a particular FOL, because the histopathologies of the FOLs are similar.

Although, some, such as ODs, are very prevalent, particularly in middle-to-old aged females of East Asian or Sub-Saharan African origin, others, such as FD and OF, though less frequent have more significant management implications for the patient. Some EODs require surgical ablation because of their aggressive behaviour.

The clinical presentations of FOLs differ. ODs are most frequently observed as incidental findings on panoramic radiographs, whereas FDs and OFs are most frequently discovered when the patient presents with swelling.

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