Maxillo-facial radiology case 110

SADJ May 2013, Vol 68 no 4 p182

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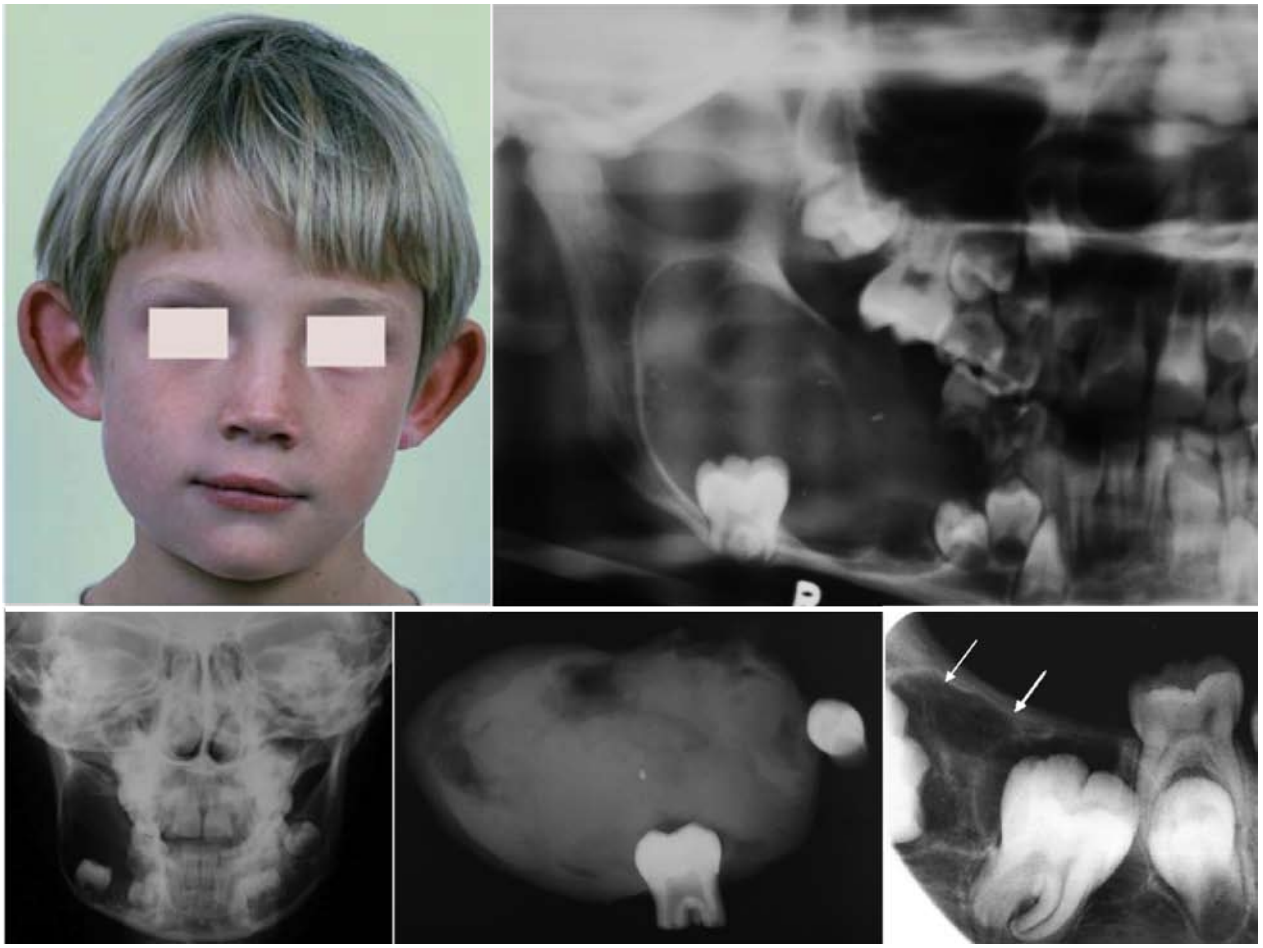
This eight-year-old child presented at the faculty with the main complaint of a swelling that has been increasing in size over the last nine months. He also mentioned that his lower right first molar tooth has not erupted. Clinical examination reveals a bony hard swelling of the lower right ramus. The primary molars on the same side show extensive caries. What are the most important radiological features and what is your provisional diagnosis?



A well-demarcated multilocular radiolucency is discernible at the angle of the mandible on the right side. The lesion caused migration of the premolars, non-eruption of the 46 and buccal and lingual expansion. A histological diagnosis of an ameloblastic fibroma was made, which is a benign, mixed epithelial, mesenchymal neoplasm that has been reported to represent approximately 2% of all odontogenic tumours. The lesion occurs in young patients in the second decade and 80% of cases occur in the posterior mandible. Over 50% of tumours cause swelling, pain, or failure of tooth eruption, most commonly the mandibular first molar. Occasionally lesions may occupy the most superior aspect of the alveolar process, as seen in the periapical view of another case (lower right figure). This lesion has a delicate multilocular appearance and has prevented the eruption of the first mandibular molar. Smaller lesions may be very similar to a dentigerous cyst. Larger lesions are characteristically multilocular. Usually the periphery is well defined and appears corticated similar to amelblastoma. The internal aspect often is completely radiolucent; in multilocular cases there may be fine, curved trabeculae. Tooth displacement and root resorption may occur. Larger lesions cause bone expansion. Radiographic differentiation from ameloblastoma, dentigerous cyst and adenomatoid odontogenic tumour is not possible although ameloblastoma is almost always observed in older age groups. The treatment of ameloblastic fibromas is curettage, because the tumour does not invade bone. In the past, unnecessary resections have been done because the diagnosis was made on the epithelial tumour component alone.

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Declaration: No conflict of interest declared.

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