

Pathology 2016: Adenoid ameloblastomas with dentinoid and cellular atypia: A rare case report and literature review - Bacem A E Ottoman - Cairo University, Egypt.

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Odontogenic Adenomatoid tumor (AOT) is continuously a benign tumor with a rare incidence of recurrence while ameloblastoma is the most common gnathic tumor which is always aggressive. Though the co-occurrence of these lesions has remained reported, this article describes a homogeneous combination of "atypical" AOT and ameloblastomatous proliferation with some malignant microscopic features. To date, around 16 cases of this rare composite odontogenic tumor have been correctly reported in the literature under the name of "adenoid ameloblastoma". Of these, none revealed cellular atypia or pleomorphism. This enormously rare ameloblastomatous irregular can pose a significant diagnostic challenge. Additionally, there have been some findings of severe nuclear vacuolation, mitotic figures, cell polymorphism, and nuclear hyperchromatism and chromatin peripherization. However, their scattered occurrence was not sufficient to affirm a malignant tumor. To authorize the ameloblastic origin and perceive the lesional potential, two immunohistochemical markers claretinin and p53 were recruited. Making themselves suspect, sustained attention should be paid to the histological and immunohistochemical examination of cases of adenoid ameloblastoma.

Ameloblastoma is the second most common odontogenic tumor, with benign but aggressive clinical behavior. This tumor shows classic features under a microscope and rarely causes diagnostic difficulties. However, sometimes ameloblastoma can present with unusual histopathologic features with formation of dentinoid. Adenomatoid odontogenic tumor (AOT), which was previously considered a variant of ameloblastoma, accounts for 3-7% of all odontogenic tumors and usually occurs in the anterior maxillary region. The microscopic features of AOT show the presence of characteristic tubular and channel-shaped structures that led to the term "adenoameloblastoma", which previously referred to this lesion. Unlike ameloblastoma, AOT is a circumscribed lesion; it is less aggressive and has limited growth potential. With this in mind, surgeons generally take a more conservative approach in the treatment of AOT compared to ameloblastoma. If treatment for AOT is adequate, the

tumor rarely reappears. Among the many cases of AOT reported in the literature, only the cases reported by Fukaya et al. and Xiang et al. Recurrence shown although Takigami reported one case of AOT which recurred three times. A comprehensive review of the literature conducted in 2004 concluded that the lesions reported as recurrent AOT are almost certainly adenoid ameloblastoma with dentinoid. Adenoid dentinoid ameloblastoma is a rare odontogenic tumor with histopathological features similar to ameloblastoma and AOT as well as hard tissue formation. The appearance of dentinoid and ameloblastoma was first reported by Slabbert et al., in 1992. However, the name "adenoid ameloblastoma with dentinoid" was introduced by the Institute of Pathology of the Armed Forces. Since then, only a few cases of this entity have been reported in the literature. This case report describes a patient with an adenoid ameloblastoma with dentinoid affecting the anterior maxillary region who was not accurately diagnosed until after the third recurrence. The lesion was previously underdiagnosed due to its characteristic localization, radiographic features and microscopic features which mainly showed the ductal pattern on the shadow of the ameloblastomatous areas.

Diagnosis: Imaging tests. X-rays, CT scans, and MRI scans help doctors determine the extent of an ameloblastoma. The growth or tumor can sometimes be found on routine x-rays at the dentist. Tissue test. To confirm the diagnosis, doctors may take a sample of tissue or a sample of cells and send it to a lab for analysis. It is important that ameloblastoma is diagnosed and treated early in order to stop the growth of tumors and possible progression to cancer. Although it is rare, ameloblastomas are known to become malignant and spread to other parts of the body, especially the lungs. The most commonly reported symptoms of ameloblastoma are: Abnormal growth of the jaw or sinuses. Painless swelling of the jaw. Bone pain - which can be continuous or come and go.

Large cysts can also damage nearby teeth, and sometimes they can grow so large that they cause a broken jaw. Regular check-ups and x-rays from your dentist will show any developing cysts, but physical symptoms may

include: pain or swelling around the jawbone. a lump in the jaw. Ameloblastoma arises from the remains of odontogenic epithelium, that is, the remains of a dental lamina. If these supports are located outside the bone in the soft tissue of the gum or the alveolar lining can give rise to peripheral ameloblastoma. Other possible sources of origin include the gingival surface epithelium and the lining of odontogenic cysts.

Ameloblastoma, although rare, is the most common odontogenic tumor, accounting for 1% of all tumors in the head and neck region and about 11% of all odontogenic tumors. They usually occur in the middle age group, i.e. 20 to 40 years, with the highest incidence observed in 33 years. They are rare in children (8.7% - 15%). Maxillary ameloblastoma and extraosseous ameloblastoma transpire in a faintly older age group, while unicystic ameloblastoma (average 10.8 years) and granular cell ameloblastoma occur in an age group younger. It shows equal sexual predilection without specific racial predominance. There is conflicting evidence on incidence rates in different breeds. Although some reports claim an increased incidence of ameloblastoma in black individuals, a large study identifies Asians as the population with the highest number of affected patients.

Ameloblastoma occurs in all areas of the jaws, but the mandible is the most frequently affected area, that is, over 80% of cases are seen here. Within the mandible, the ramus zone of the molar angle is involved three times more frequently than the premolar and anterior regions combined. In the maxilla, most commonly occur in the molar region, but can occasionally be seen in the anterior region, maxillary sinus, and nasal cavity. On the basis of clinical, radiographic, histopathological and behavioral aspects.

Ameloblastomas grow slowly and are usually asymptomatic until swelling is noticed. Most patients therefore typically present with a complaint of swelling and facial asymmetry. Sometimes small tumors can be identified on the routine x-ray. As the tumor grows it forms a hard swelling and later can cause thinning of the cortical bone resulting in crackling of the eggshell which can be caused. The slow growth also allows for reactive bone formation leading to gross enlargement and distortion of the jawbone. If the tumor is neglected, it can puncture bone and spread to soft tissue, making excision extremely difficult. Pain has been reported as an occasional finding that could be attributed to secondary infection. Other effects include tooth mobility, displacement of teeth, root resorption, paresthesia if the inferior alveolar canal is involved,

failure of the tooth eruption and very rarely the ameloblastoma can ulcerate through the mucous membrane.

Radiology: Ameloblastoma habitually presents as a well-defined multinodular radiolucency with a scalloped border typically described as a "honeycomb" or soap bubble appearance. However, unicystic ameloblastoma usually presents as a unilocular radio transparent containing an impacted tooth. They usually infiltrate through the medullary bone, therefore the radiographic margins are not precise indicators of the extent of involvement. An expansion of the oral and lingual cortical plates, root displacement and resorption may also be observed. Desmoplastic ameloblastoma present with an ill-defined radiopaque radiopaque lesion reminiscent of a fibro-osseous lesion.