

HYBRID ODONTOGENIC LESION: A DIAGNOSTIC CHALLENGE

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Objectives

Hybrid lesions or combined lesions have been rarely described in the literature, even more rarely ameloblastoma with combined lesions (1). We report a case of a 37-years old male, previously operated in another Hospital (5 years ago) for an osteolytic lesion of the body of the mandible, which had grown over time by about 4 cm. The diagnosis was an ameloblastoma. Currently, the patient came at our service of Oral Surgery of the "University L. Vanvitelli" with a bone lesion in the same region as the previous surgery, swollen, osteolytic, measuring 3x2 cm. The aim of this case report is to highlight a rare case of ameloblastoma associated to central giant cell lesion.

Methods

An incisional biopsy of this osteolytic component was carried out on the left side of the lesion and the specimen was referred to histopathological examination. The sample was fixed in neutral buffered formalin (10%) for 24 hours, then underwent a decalcifying treatment (Osteodec) for 6 hours. Subsequently, it was cut and processed for embedding in paraffin. Following this, multiple sections were prepared, stained with Hematoxylin and Eosin, and additional sections were prepared for immunohistochemistry (specifically CK19 and CD68).

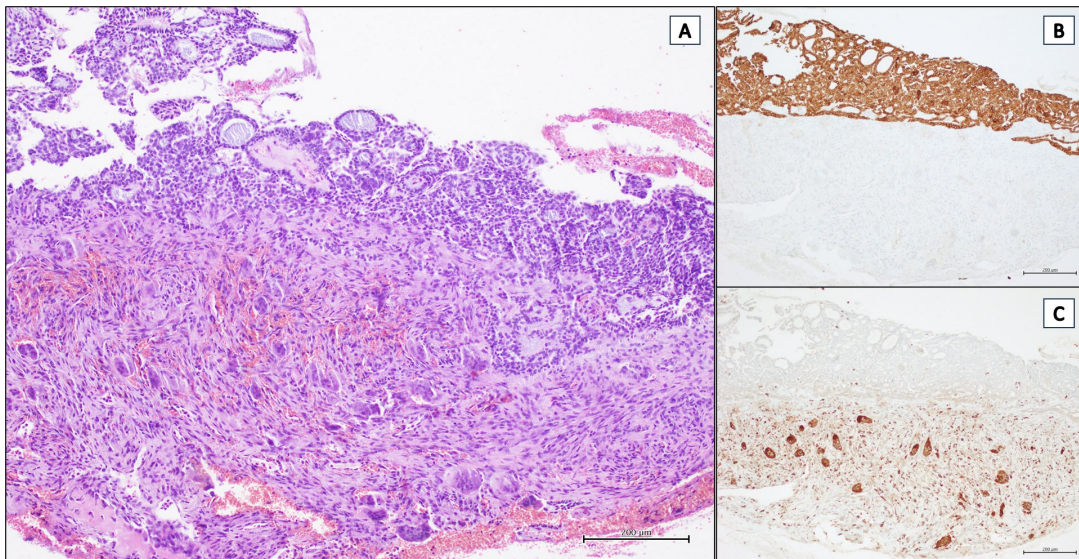


Figure: A) Histology showed a hypercellular odontogenic proliferation with solid-cystic pattern associated to a mesenchymal giant-cell rich proliferation. The immunohistochemical profile showed positivity for CK19 in the ameloblastoma (B) and a CD68 positivity in the giant cells (C) providing a clear demarcation between these two components

Results

At microscopic examination the sample showed several fragments (measuring 1x1 cm), fibro-osseous connective infiltrated by odontogenic epithelium arranged in islands and micro-cystic structure. This population was composed by elements of medium size, with scanty cytoplasm, hyperchromic nuclei and reversed polarity, compatible with recurrence of ameloblastoma. Juxtaposed to this, a mesenchymal proliferation was present, showing a highly cellular lesion, characterized by a prevalence of ovoid fibroblasts and disorganized collagen fibers interspersed with numerous multinucleated giant cells of varying sizes. Immunohistochemistry against CD68 highlighted the multinucleated giant and the mesenchymal cells, whereas cytokeratin 19 (CK19) stained the odontogenic epithelium. Then, the diagnosis of ameloblastoma associated to central giant cell lesion (CGCL) was made.

Conclusions

Currently, there have been few reported instances of collision tumors, likely due to these lesions going unnoticed and/or being diagnosed based on one of their prominent microscopic features (1). This scarcity of cases makes it challenging to predict their biological behavior (2). It is reported an increased risk of recurrence for hybrid lesions or collision tumors containing a CGCL component. These findings suggest the importance of extended long-term monitoring and meticulous management (3). Studies with long-term follow-up information are necessary to understand the pathogenesis and biologic behavior of hybrid lesions and collision tumors.

References

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