ISSN: 3033-3555

Editorial Article

Journal of Stomatology & Dental Research

Editorial letter On WHO ‘s Update on Odontogenic Tumor 2022

Priyanka Agarwal

DMD, BDS, MDS Oral & maxillofacial Pathology and Microbiology, Currently - General Dentist Pennsylvania, USA

Corresponding author
Dr. Priyanka Agarwal DMD, BDS, MDS Oral & maxillofacial Pathology and Microbiology, Currently – General Dentist Pennsylvania, USA.

Received: September 30, 2024; **Accepted:** October 08, 2024; **Published:** October 14, 2024

No Disclosures

The categorization of odontogenic tumors has consistently sparked debate. The most recent classification was published by WHO in March 2022, only 5 years after the previous classification in 2017. The 2022 edition introduces a new entity, a rhabdomyosarcoma of bone with TFCP2 rearrangement, which shows a preference for the jaws. Additional significant changes involved including a surgical ciliated odontogenic cyst, introducing a newly identified benign epithelial odontogenic tumor - adenoid ameloblastoma, and incorporating segmental odontomaxillary dysplasia into the group of fibro-osseous tumors and dysplasia lesions. Alternatively, melanotic neuroectodermal tumors of infancy and osteoid osteoma were removed from the category of benign bone and cartilaginous tumors, as was the hematolymphoid tumor of solitary plasmacytoma of bone. The upcoming paragraphs will discuss alterations in odontogenic tumors and cysts.

The ciliated cyst following surgery, although not novel, is newly categorized [1]. It is an uncommon cyst that occurs when the respiratory lining is implanted into the jaw bones due to trauma, typically seen in patients in their 50s and 60s.

COCs are cysts that develop with ameloblastoma-like epithelium and ghost cells that often calcify, as defined by WHO 2017. The meaning of calcifying odontogenic cysts (COC) has been updated to only include the existence of specific ghost cells capable of becoming calcified, with the ameloblastoma-like lining epithelium being a preferred diagnostic characteristic. The cause of COC is associated with finding mutations in the CTNNB1 gene (part of the Wnt pathway) which codes for the beta-catenin protein.

A glandular odontogenic cyst (GOC) is characterized by an epithelial lining that looks like glandular tissue. In the 2017 version, a list of ten specific histopathological criteria was provided, suggesting that meeting seven of them could significantly support a GOC diagnosis. Two of these criteria were found to be present in all lesions: the thickness of the epithelium and the presence of hobnail cells in the luminal layer, at least locally. In the 2022 categorization, every histological aspect is distinct but none are mandatory.

Adenoid ameloblastoma (AdAM) is a recently identified type of tumor distinct from the Ameloblastoma (AM) group, described as a neoplasm made up of cribriform architecture and duct-like structures, frequently containing dentinoid [1]. Around 40 published cases exist, with the highest occurrence in the fourth decade (age range 25-52 years), and a slight preference towards females. It tends to affect the jawbone (64.7%) and typically appears as a painless bump, sometimes accompanied by pain and tingling sensations. Radiologically, the majority of tumors appear as radiolucent areas with some radio-opaque spots, along with unclear edges and cortical perforation when detected. The main histopathological characteristics of AdAM include an ameloblastoma-like element, tube-like formations, whorled cell condensations resembling morules, and a cribriform structure. Around 66% of tumors have different levels of dentinoid present. Overlapping microscopic characteristics are present in AOT and DGCT, however, the unique features of AdAM are anticipated to differentiate it from these conditions [2].

In the 2017 classification, Odontogenic myxoma with more collagen was called myxo fibroma, but in the 2022 edition, it is called fibro myxoma.

Citation: Priyanka Agarwal. Editorial letter On WHO ‘s Update on Odontogenic Tumor 2022. J Stoma Dent Res. 2024. 2(2): 1-2.
DOI: doi.org/10.61440/JSDR.2024.v2.12

Ameloblastic carcinoma (AMCa) is described in the 2022 WHO classification as a type of primary odontogenic carcinoma that looks similar to ameloblastoma histologically.

Conflict of interest: The author declare that they have no conflict of interest associated with this letter

Reference

1. WHO Classification of Tumors Editorial Board. Head and neck tumors. Lyon (France): International Agency for Research on Cancer; 2022. (WHO classification of tumors series, 5th ed). 2022. 9.
2. Vered M, Wright JM. Update from the 5th Edition of the World Health Organization Classification of Head and Neck Tumors: Odontogenic and Maxillofacial Bone Tumors. Head Neck Pathol. 2022. 16: 63-75.

Copyright: © 2024 Priyanka Agarwal. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.