Research paper 33

RP 33

Adenomatoid odontogenic tumor: a retrospective clinicopathological analysis of 24 cases from Pakistan

S. Zafar, N. Ud Din, M. Nisar

Department of Pathology and Laboratory Medicine, Aga Khan University and Hospital, Karachi, Pakistan

Introduction and objectives: Adenomatoid odontogenic tumour (AOT) is a rare benign epithelial odontogenic tumour. A few studies have described the histological features of this uncommon tumour. The objective was to describe the histopathological features of AOT in a cohort of patients from Pakistan.

Methodology: We reviewed the haematoxylin and eosin-stained slides of cases of AOT diagnosed in our centre between 2009 to 2021.

Results: Twenty-four cases of AOT were studied, twelve were female (mean age was 19.5 years), and 12 were male (mean age 13.8 years). Tumour sites included maxilla (50%, n=12), mandible (20.8%, n=5), gingiva (8%, n=2), right buccal vestibule (4%, n=1), canine tooth (4%, n=1) and periapical region (4%, n=1). Histologically, most cases exhibited a predominantly solid growth pattern (95.8%, n=23) with a similar proportion of solid and duct-like areas. Lattice work pattern was also seen in most cases (87.5%, n=21). Eosinophilic amorphous material was found in all cases. Most tumours showed duct-like spaces (95%, n=23). Tiny foci of calcifying epithelial odontogenic tumour (CEOT)-like areas were seen in 37.5% (n=9) cases. Variable amounts of calcifications (dystrophic and psammomatous) (87.5%, n=22), osteodentin (20.8%, n=5) and fibrocollagenous stroma (33%, n=8) were seen. 12.5% (n=3) cases were associated with an impacted tooth. One case showed hybrid ossifying fibroma-like changes. 58.3% (n=14) showed macrocystic areas lined by stratified squamous epithelium. Follow-up was available in 12 patients, and no unequivocal recurrences were reported.

Discussion and conclusion: Our results validate the findings of other studies on the histopathological features of AOT. Our results suggest that AOTs usually show a predominantly solid pattern with duct-like spaces. The results of anatomic distribution are similar to published literature. Only a few cases with CEOT-like areas in AOTs have been reported in the past. Hybrid AOT with ossifying fibroma is very rare and was seen in one of our cases.

Keywords: adenomatoid odontogenic tumour, odontogenic tumour, histopathology

Corresponding author: Dr S Zafar
Department of Pathology and Laboratory Medicine, Aga Khan University and Hospital, Karachi, Pakistan
summaya.zafar@aku.edu

This is an open access article licensed under a Creative Commons Attribution-ShareAlike 4.0 International License, (CC BY-SA 4.0), which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are attributed and materials are shared under the same license.