



# CLEAR CELL ODONTOGENIC CARCINOMA

Causa Trisna Mariedina<sup>1</sup>, Fitri Dewi Ismida<sup>2</sup>, Sri Wahyuni<sup>1</sup>

## INTERNATIONAL CONFERENCE ON INTEGRATIVE PHYSIOLOGY AND MOLECULAR MEDICINE

"Health and Disease:  
The Integration of Physiological  
Instruments and Molecular Techniques"

<sup>1</sup> Anatomical Pathology Department of Medical Faculty,  
Universitas Sumatera Utara, Medan

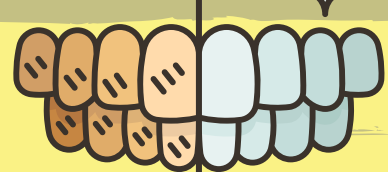
<sup>2</sup> Anatomical Pathology Department of Zainal Abidin Hospital Banda Aceh

Corresponding author : Causa Trisna Mariedina (causatrisna.dr@gmail.com)



## Introduction

Malignant odontogenic tumors account for 6% of the total number of odontogenic tumors. Clear cell odontogenic carcinoma (COdC) is an uncommon tumor originating from the odontogenic cells. Initially documented in 1985, but formally acknowledged as a cancerous growth in 2005. The majority of instances are observed in females between the ages of 40 and 59. The mandible is more prevalent in the maxilla.



## Radiology



Panoramic X-ray shows radiolucency with damage to the alveolar cortex in the mandible, tooth displacement and "floating" teeth.



Head CT scan. The SOL infiltrates the soft tissue of the right cheek and presses on the right masseter muscle, containing calcification and fragments of mandibular bone fragments.



## Discussion & Conclusion

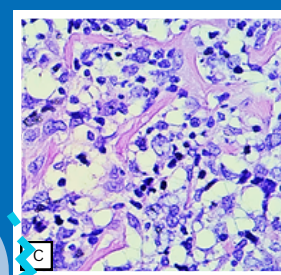
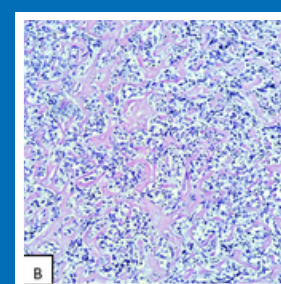
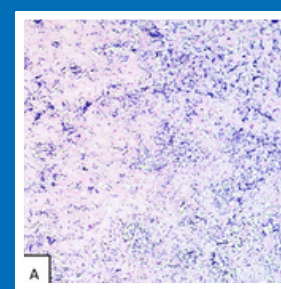
The patient was diagnosed as clear cell odontogenic carcinoma based on the findings from clinical, radiographic, and histopathological investigations. The tumor was determined to have no lymphovascular invasion or perineural invasion, and it was classified according to the International Classification of Diseases for Oncology (ICD-O) as 9341/3.

## Case Description

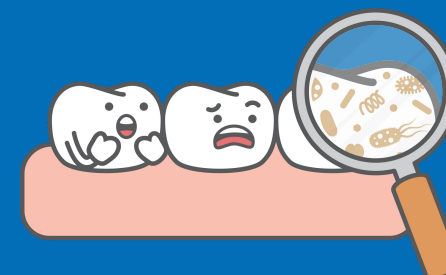


A 38-year-old man with complaint of painless swelling in the right cheek area persisting for the last 6 months. A panoramic radiograph and computed tomography (CT) scan of the head were conducted. Upon macroscopic inspection, two tissue samples from the mandible were received. The color was grayish white with an uneven surface and a rubbery substance. The tissue taken from the jaw showed an abundance of tumor cells that formed clusters within hyalinized stroma. The tumor cells exhibit a polygonal morphology, with enlarged nuclei that are round to oval in form. The nuclei are hyperchromatic, with some of the chromatin displaying a coarse texture. The nucleoli are prominently visible, and the cytoplasm appears clear. There is no evidence of lymphovascular and perineural invasion in this particular patient.

## Histopathology



Clear cell odontogenic carcinoma. (A) and (B) Tumor cells that form nests among the hyalinized stroma. (HE, 40x and 100x). (C). The tumor cells have a polygonal shape, enlarged round oval nuclei, hyperchromatic, some of the chromatin is coarse, the nuclei are prominent, and the cytoplasm is clear. (HE, 400x)



## References

1. Santana T, de Andrade FL, de Sousa MC, da Rocha GBL, Trierveiler M. Clear cell odontogenic carcinoma harboring the EWSR1-ATF1 fusion gene: report of a rare case. *Head Neck Pathol.* 2020;14(3):847-51.
2. Jannu A, Rao G, Kulambi M, Talkal AK, Suma MS, Deepa KK, et al. Clear cell odontogenic carcinoma of maxilla : A rare case report. *Natl J Maxillofac Surg* 2021;12 :124-7.