Letter to the Editor

Primary intraosseous squamous cell carcinoma in a dentigerous cyst

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Dear Editor,

A 76-year-old male complained of a swelling in relation to the right mandibular molar for 4 months. Intraorally, a fluctuant swelling was present on the alveolar ridge measuring 4 cm × 3 cm. Orthopantomogram revealed an impacted 48 with soft tissue shadow. Computed tomography scan revealed a pericoronal cystic lesion with expansion of the buccal and lingual cortices [Figures 1 and 2]. The case was provisionally diagnosed as dentigerous cyst. On excisional biopsy, the gross specimen exhibited a cystic structure surrounding the tooth at the cementoenamel junction [Figure 3]. Histopathology exhibited hyperplastic cystic lining epithelium with connective tissue wall. The epithelium is of stratified squamous type, exhibiting irregular rete processes, nuclear hyperchromatism, pleomorphism and increased mitosis. Tumor cells are seen arising from the lining epithelium and extending into the lumen [Figures 4 and 5]. Connective tissue wall is infiltrated with tumor cells in some areas. Mucicarmine and periodic acid–Schiff stain was negative. Lining epithelium resembling reduced enamel epithelium was present in a section. A diagnosis of squamous cell carcinoma (SCC) arising from dentigerous cyst was made.

The patient was later referred to an Oncology center. Associating the histopathological and imaging features\(^1,2\) a diagnosis of primary intraosseous SCC (PIOSCC) was made. PIOSCC is defined as a “SCC arising within the jaw, having no initial connection with the oral mucosa and presumably developing from residual odontogenic epithelium or an odontogenic cyst or tumor.”\(^2\) Incidence of malignant transformation from odontogenic cysts ranges from 0.13% to 2%.\(^3\) PIOSCC arising from odontogenic cysts other than

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keratocystic odontogenic tumor commonly occurs in mandible with male predilection, at an average age of 56 years. Radiation and chemotherapy are included in the treatment modalities. The 5-year survival rate of PIOSCC varies between 30% and 40%.

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**Conflicts of interest**

There are no conflicts of interest.

**Karthika Panneerselvam, Anantanarayanan Parameswaran, B. Kavitha, Elavenil Panneerselvam**

Department of Oral Pathology and Microbiology, Karpaga Vinayaka Institute of Dental Sciences, Kanchipuram, Maduranthakam, Departments of 1 Oral and Maxillofacial Surgery and 2 Oral Pathology and Microbiology, Meenakshi Ammal Dental College, 3 Department of Oral and Maxillofacial Surgery, SRM Dental College, Chennai, Tamil Nadu, India

**Correspondence to:** Dr. Karthika Panneerselvam, E-mail: karthikaomfp@gmail.com

**References**

1. Saxena C, Aggarwal P, Wadhwan V, Bansal V. Primary intraosseous squamous cell carcinoma in odontogenic keratocyst: A rare entity. J Oral Maxillofac Pathol 2015;19:406.
2. Iino M, Ishikawa S, Ozaki H, Kobayashi T, Tachibana H, Sakurai H, et al. Solid type primary intraosseous squamous cell carcinoma in the maxilla: Report of a new case. BMC Ear Nose Throat Disord 2013;13:13.
3. Araújo JP, Kowalski LP, Rodrigues ML, de Almeida OP, Lopes Pinto CA, et al. New response evaluation criteria in solid tumours: Revised RECIST 2009. Eur J Cancer 2010;46:222-34.
Dear Editor,

We have read with interest the article by Panneerselvam et al. regarding the molecular characterization of metastatic exon 11 mutant gastrointestinal stromal tumors (GIST) in Indian patients. We would like to complement their findings by highlighting some key points that we believe are important for future research.

Firstly, the authors note the presence of KIT mutations in GISTs, which is well-established. However, it is important to consider the role of other genetic alterations, such as PDGFRA mutations, which may also contribute to the development of drug resistance in GISTs.

Secondly, the authors mention the use of molecular markers to predict the outcome of patients treated with imatinib. While this approach may be feasible in some settings, it is not always practical in resource-poor areas. Hence, the dependence on scoring systems do not always lead to accurate predictions.

We would like to stress the importance of considering these points in future research, as they could inform the development of more effective treatment strategies for GISTs.

Yours sincerely,

[Author Names]

References:
1. Panneerselvam K, Parameswaran A, Kavitha B, Panneerselvam E. Primary intraosseous squamous cell carcinoma in a dentigerous cyst. South Asian J Cancer 2017;6:105-17.
2. Heinrich MC, Corless CL, Blanke CD, Demetri GD, Joensuu H, Roberts PJ. A molecularly defined subtype of gastrointestinal stromal tumor with clinical implications. J Clin Oncol 2006;24:4764-74.
3. Lasota J, vel Dobosz AJ, Wasag B, Wozniak A, Kraszewska E, Michej W, Lasota J, Dansonka-Mieszkowska A, Stachura T, Schneider-Stock R. Classification of Tumours: Pathology and Genetics of Head and Neck Tumours. Lyon: IARC Press; 2005. p. 291.
4. Barnes L, Everson J, Reichart P, Sidransky D. World Health Organization Classification of Tumours: Pathology and Genetics of Head and Neck Tumours. Lyon: IARC Press; 2005. p. 291.
5. Zapala-Pospiech A, Wyszynska-Pawelec G, Adamek D, Tomaszewska R, Zaleska M, Zapala J. Malignant transformation in the course of a dentigerous cyst: A problem for a clinician and a pathologist. Considerations based on a case report. Pol J Pathol 2013;64:64-8.

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