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**EVOLIUCINĖ MEDICINA:
ŽMOGAUS RAIDOS PERSPEKTYVOS IR SVEIKATA
BESIKEIČIANČIOJE APLINKOJE**

**EVOLUTIONARY MEDICINE:
PERSPECTIVES ON HUMAN DEVELOPMENT AND HEALTH
CONSEQUENCES IN A CHANGING ENVIRONMENT**

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RADIOLOGICAL FEATURES OF ROOT RESORPTION ASSOCIATED WITH JAW CYSTS

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Background and Aim: Panoramic radiography is a widely used primary diagnostic method that enables the assessment of the localization and size of cystic lesions, as well as damage to surrounding structures. Therefore, this study aimed to identify and evaluate radiological signs of dental root resorption and their associations with jaw cysts by analyzing patients' orthopantomograms.

Materials and Methods: Following approval from the Bioethics Committee (No. 2024/9-1607-1065), panoramic radiographs performed between 2018 and 2023 at Vilnius University Hospital Žalgiris Clinic and showing jaw cysts were retrospectively analysed. Anonymised orthopantomograms were assessed, allowing identification only of the patient's age and sex. Sociodemographic and radiological data were analysed, including cyst type, localisation, size, and signs of root resorption. Diagnoses were classified according to ICD-10-AM. Descriptive statistical methods and non-parametric tests were used for data analysis. Statistical significance was assessed at a significance level of $p < 0.05$.

Results: Among 1,285 identified cases of jaw cysts, dental root resorption was recorded in 90 cases, including 41 women and 49 men. The mean age of study participants was 47 years. Signs of dental root resorption were identified in cases of radicular cysts ($n = 73$) and other jaw cysts ($n = 17$). The mean cyst size was 21 mm. By localisation, more cases of root resorption were observed in the maxilla—55 cases—compared with 35 cases in the mandible ($p = 0.035$). Segmental analysis showed that the highest number of root resorption cases occurred in the anterior maxillary segment ($n = 47$), with fewer cases found in the anterior mandibular segment ($n = 13$) and mandibular molar region ($n = 15$).

Conclusions: Root resorption was observed in cases of radicular cysts and other jaw cysts. This pathology was most frequently identified in the anterior maxillary region.

Keywords: jaw cysts, orthopantomograms, root resorption