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Evaluation of HCMV and EBV in odontogenic cysts fluids by molecular biological methods

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Introduction: Odontogenic cysts are commonly seen pathological lesions in the jaw bones. Odontogenic cysts may be inflammatory or developmental regarding their origin. Pathogenesis differs due to the types of the odontogenic cysts and recurrence may be observed. Including periapical lesions, the roles of oral bacteria on periodontal infections were stated, however a study conducting the identification of the bacteria was not found before. Along with this, viruses such as human cytomegalovirus and Epstein Barr virus were observed on the inflammatory cells present in the periodontal lesions. However the role of the virus presence in the odontogenic cysts' ethiopathology was not stated. The main purpose of this study is to evaluate the role of the Human Cytomegalovirus (HCMV) and the Epstein-Barr (EBV) viruses in the pathogenesis of the radicular cysts' (RCs) and odontogenickeratocysts' (OKCs) fluids.

Material and Methods: The fluid samples were collected from 34 (11 Female, 23 Male, mean age 44.06 ± 12.24) patients. The samples consist of 21 OKCs and 13 RCs. PCR technique was used to assess the presence of HCMV and EBV.

Results: EBV and CMV were found in RCs and OKCs. EBV was present in 13 OKCs (38.23%) and in 9 RCs (26.47%). HCMV was detected in 1 OKCs (2.94%) and 3 RCs (8.82%). There was no statistical significance between cyst type, age, and sex.

Conclusion: EBV and HCMV were present in both RCs and OKCs. Further studies are needed to assess the role of these viruses in the pathogenesis of odontogenic cysts and to assess the possible correlation between these viruses and the bacteria.

Biography

Fahriye Keskin has graduated from Blacksea Technical University Department of Biology as well Master Degree Kocaeli University Medical Faculty Department of Microbiology and Clinical Microbiology. She completed her PhD degree Istanbul University Medical Faculty Department of Microbiology and Clinical Microbiology at 2003 and also became Associated Professor at 2012. She has been working as a specialist and researcher of Microbiology in Istanbul University Dentistry Faculty since 2006. Her main fields of interest include oral and molecular microbiology, viruses and bacteria. She has published national and international scientific articles which have been cited 80 times. She is a member of the Turkish Society for Microbiology.

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