

DENTISTRY AND MAXILLOFACIAL SURGERY

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Optical coherence tomography aspects in the cervical area of teeth subjected to occlusal overloads

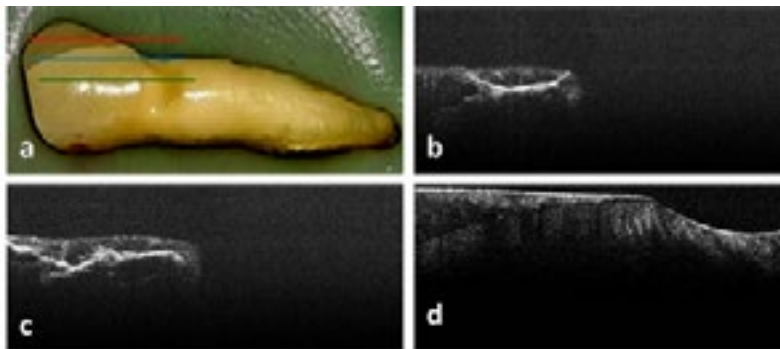
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Statement of the Problem: Teeth subjected to occlusal overloads frequently have attrition and non-carious cervical lesions (NCCL). The etiopathogenic mechanisms of NCCL are incompletely known and represent a subject of interest for specialists. Optical Coherence Tomography (OCT) is an advanced non-invasive biomedical imaging technique that allows the examination of the internal biological structure. It can be used for highlighting tooth lesions. The purpose of this study was to identify using Swept Source Optical Coherence Tomography (SS-OCT) the effects of the occlusal overloads in the cervical area of teeth and to determine which teeth are most affected.

Methodology & Theoretical Orientation: The study was performed on extracted teeth, priorly subjected to occlusal overloads. Selected teeth were examined macroscopically and using SS-OCT to determine the occlusal wear and the presence of NCCL and cracks in the cervical area. Findings: We established the diagnosis of occlusal wear of various degrees for all teeth. The lesions identified in the cervical area were cracks and NCCL and were found in all teeth. The buccal dental surfaces were more likely to have multiple cervical lesions.

Conclusion & Significance: The study showed the effects of occlusal overloads in the cervical area of teeth and established a correlation between occlusal wear and NCCL.



Recent Publications:

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Biography

Andreea STĂNUȘI is a DMD PhD graduate, Prosthodontic Medical Resident, Teaching Assistant, Department of Prosthodontics, Faculty of Dentistry, University of Medicine and Pharmacy of Craiova, Craiova, Romania. She (DOB: September 22, 1992) graduated from the Faculty of Dentistry, University of Medicine and Pharmacy of Craiova in 2017 and became Medical Resident in Prosthodontics. As a student, she held various positions: President of the Craiova Stomatology Students Society (2013-2014), Member of the Faculty Council (2016-2017), and Member of the University Senate (2016-2017). As a postgraduate her activity is still connected with the academic life. In 2021, she finished her PhD regarding the etiology of non-cariou cervical lesions and became Teaching Assistant at the Department of Prosthodontics, Faculty of Dentistry, University of Medicine and Pharmacy of Craiova, Craiova, Romania.

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