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Abstract OP68

Determining Dental Caries Risk in Belarusian Patients Undergoing Orthodontic Treatment

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Aim(s): To develop and test an algorithm for assessing the likelihood of dental caries in patients undergoing orthodontic treatment with a bracket system.

Methods: The study was conducted at the University Dental Clinic of the Belarusian State Medical University, Minsk, in September-November 2024. The Committee on Biomedical Ethics of BSMU approved the project. Controllable risk factors for dental caries were assessed in 44 patients aged 11–25 years undergoing orthodontic treatment with brackets. The following factors were evaluated: frequency of meals; consumption of sweet carbonated drinks or fruit juices; use of fluoride-containing toothpaste; DMFT index (Decayed, Missing, Filled Teeth); number of teeth with enamel demineralisation; OHI-S index (Oral Hygiene Index – Simplified); and PMA index (Papillary-Marginal-Attached gingival index). Each risk factor was scored from 0 to 2 points. The cumulative score was subsequently used to categorise the likelihood of dental caries development as follows: 0–2 points indicating low risk, 3–8 points indicating moderate risk, and 9–12 points indicating high risk.

Results: Among the patients studied, 30 (68%) had a low probability of developing dental caries, and 14 (32%) had a moderate probability. No patients were classified as having a high probability of developing caries.

Conclusions: The proposed algorithm supports a differentiated approach to selecting optimal preventive strategies for dental caries based on individual risk. It shows potential for use in clinical orthodontic practice.

Keywords: Dental Caries Risk, Belarusian Patients, Orthodontic Treatment

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