

Diagnosis and measurement of tooth wear using intraoral scanner – a pilot study

Objectives: Dental wear is an irreversible process that poses a common problem in society. Early diagnosis of this phenomenon and determination of individual causes can be significant from the perspective of oral health disorder prevention. Intraoral scanners are increasingly being utilized as a diagnostic and therapeutic tool in dentistry, including the assessment of quantitative loss of hard tooth tissues. The aim of this study was to verify the effectiveness of measuring tooth wear in patients using an intraoral scanner and to determine its extent, as well as to identify possible causes of this phenomenon in patients undergoing prosthetic and orthodontic treatment.

Materials and methods: The study involved clinical examinations, dental measurements using an intraoral scanner, and determination of patients' saliva pH levels. Additionally, patients completed questionnaires regarding etiological factors and existing pathological conditions of the stomatognathic system. Tissue loss was measured, and the obtained results were subjected to statistical analysis.

Results: Intraoral scanners proved to be effective in measuring the extent of hard tooth tissue loss. This problem manifested to varying degrees on individual tooth surfaces, and prosthetic and orthodontic treatments, as well as lifestyle, could influence this phenomenon.

Conclusions: Progressive loss of hard tooth tissues can be effectively monitored using intraoral scanners. It is important to identify individual causes of tooth wear to enable early implementation of preventive measures. This study highlighted the need for further exploration of this phenomenon through comprehensive research.

Keywords: hard tooth tissue loss, tooth wear, intraoral scanner, monitoring, erosion, saliva.