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Evaluation of postoperative pain in patients submitted to periodontal surgeries

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ABSTRACT

Introduction: The Miller McEntire Periodontal Prognostic Index (MMPPI) is a simple, powerful, evidenced-based, statistically validated, and accurate motivational tool that provides the periodontal prognosis on molar teeth [1]. This study aimed to evaluate and establish the periodontal prognosis and risk assessment of diseased molars, based on the MMPPI, in a sample of patients from a population-based epidemiologic survey carried out in the southern Lisbon Metropolitan Area.

Materials and methods: From December 2018 to April 2019, data were collected on 4,063 molars from a total of 1,064 patients, by two calibrated examiners (J.B. and V.M.). The considered prognosis parameters for MMPI calculation were: age, furcation involvement, smoking, probing depth (mm), mobility and molar type [2]. An MMPPI score higher than six was considered representative of a molar tooth at high risk. Potential risk factors, such as gender, dental arch, and quadrant location were assessed by logistic regression modelling. Univariate and adjusted multivariate odds ratio (OR) and correspondent 95% confidence intervals (95% CI) were determined. This study was approved by the ARSLVT Ethics Committee (3525 & 8696/CES/2018).

Results: From the 4,063 molars present at the time of observation (47.7% from total), 202 (5.0%, 95% CI: 4.3–5.7%) were identified as being at high risk. Overall, the MMPPI score ranged from 0 to 12 with a median of 2. A logistic regression model was fitted to the data. Within the model, being located on the upper arch (OR = 8.9, 95% CI: 5.4–14.7) and belonging to a male patient OR = 2.0, 95% CI: 1.5–2.6), were the factors significantly associated with a tooth at high risk.

Discussion and conclusions: This index contributes to a more informed prognostic assessment of periodontally compromised molars [1]. Male patients and upper molars are the main risk factors that increase the likelihood of developing periodontal problems in molars. These results highlight potential targeting for public health measures.

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Evaluation of postoperative pain in patients submitted to periodontal surgeries

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ABSTRACT

Introduction: Different periodontal surgeries are used to treat a variety of periodontal conditions in favour of a healthy and aesthetic periodontium [1]. However, the fear of surgical treatment is common, most often depriving patients of undergoing complete dental treatments. Patients' questions and concerns are often pain-related [2]. Adequate understanding of the intensity and variables that affect pain is essential because it can produce emotional responses that may influence treatment adherence [3]. The objectives of this study are evaluation of pain after periodontal surgery and its relationship with variables related to the patient, surgery and postoperative care.

Materials and methods: This study was approved by the Egas Moniz Ethics Committee and by the Direction of the Egas Moniz University Clinic (CUEM). All patients referred in the sample signed an informed consent form. Questionnaires were applied to 63 patients submitted to periodontal surgeries at the Post-graduation Course of Periodontology at the CUEM. Data was collected through the completion of two questionnaires. The first questionnaire was composed of two parts and was applied in the presence of the patient. The part A was done on the day of surgery for the purpose of collecting data from the patient's clinical history and related with the surgery; and the part B on the day of suture removal about post-operative care. The second was delivered on the day of surgery with the Visual Analogue Scale. The patient was asked to fill it on the day of surgery, on the next two days after surgery and also on the day of suture removal, returning it on that day.

Results: It was found that the highest pain levels were experienced by the patients on the day of surgery, with a median value of 6.9. The degree of postoperative pain is not related with gender, type of periodontal disease, type of periodontal surgery, technique performed, teeth involved, duration of surgery, antibiotic intake, use of chlorhexidine gel and

mouthwash, absence of mechanical plaque control and absence of physical exercise. On the other hand, the degree of postoperative pain is dependent on factors such as age (with older patients experiencing less pain), smoking habits and smoking cessation (non-smoking patients or those who stopped the habit in the postoperative period showed less postoperative pain). The use of nonsteroidal anti-inflammatory drugs and its duration influence the postoperative pain.
Discussion and conclusions: Periodontal treatment often includes several surgical procedures, so a bad postoperative period may prevent the patient from continuing treatment, which may in some cases jeopardise the maintenance of teeth. Smoking habits have been shown to be the most prominent variable in postoperative pain. It is therefore extremely important to encourage patients to stop smoking or when it is not possible to interrupt during the postoperative period.

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Evaluation of self-perception of awake bruxism in dentistry students – clinical case series

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ABSTRACT

Introduction and Objectives: Bruxism is a repetitive muscular activity of the masticatory muscles where there may, or may not, exist dental contact and, depending on the adaptability of the individuals may cause lesions in the stomatognathic apparatus [1]. It is now possible to use the Ecological Momentary Assessment (EMA), which involves carrying out a self-report questionnaire about Awake Bruxism (AB) at various times of the day, in a random order in the subject's environment through smartphones [2]. The main objective of this study was to analyse auto perception of AB through the use of EMA in dentistry students.
Materials and Methods: Ten ($n = 10$) dentistry students of the Instituto Universitário Egas Moniz, in Almada, Portugal, with access to a smartphone, were invited to participate in this study. All the assumptions of the Helsinki Declaration have been fulfilled and an informed consent for clinical case of Clinica Dentária Egas Moniz approved by the ethic commission of Instituto Universitário Egas Moniz. Initially, it was requested the signature of the informed consent. Then, each student answered two questionnaires (T_0): The first was a specific bruxism questionnaire and the second was the "General Anxiety Disorder-7" (GAD7) questionnaire [3]. Finally, after a slideshow presentation about the BruxApp®, each student downloaded this app to their smartphone. The students were asked to use the app for 7 days, answering to, at least, 12 random alerts that were sent randomly during the day. At the end of 7 days-period the students were asked to answer again to the same 2 questionnaires (T_1).
Results: Unfortunately, we were not able to collect results from smartphones with the Android System® resulting in 5 dropouts. The results through the BruxApp® were: Relaxed: 74.1%; Teeth Contact: 15.52%; Teeth Clenching: 2.68%; Teeth grinding: 0%; Mandible Bracing: 7.62%. In what concerns the answers to the questionnaires: There was no major difference in GAD-7 questionnaire in T_0 and T_1 among students. Nevertheless, on the bruxism assessment questionnaires, in T_0, four ($n = 4$) students did not have AB self-perception. However, in T_1 all the students ($n = 5$) referred an increased self-perception of AB after using BruxApp® for 7 days. In total, the prevalence of AB among students was 24.8%.
Discussion and conclusions: The total prevalence of AB (24.8%), was very similar to the study of Bracci [2] Also, teeth contact was shown to be the most frequent habit in both studies [2]. We can conclude, that in our study, the smartphone application BruxApp® allowed patients to have more information about AB, likewise increasing self-perception and contributing to establish a clearer idea of bruxism as an epidemiology. Moreover, it is important to refer that, besides being a pilot study, the loss of half of the participants due to failures with the Android System®, this is a severe limitation of this study.

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