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Vanessa Machado, João Botelho, Luís Proença, Ricardo Alves, Maria Alzira Cavacas, Luís Amaro & José João Mendes

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Evaluation of an experimental setup to analyse the intermaxillary relation in surfers

F. Santos^a, P. Cebola^a, S. Félix^{a,b}, C. Godinho^{a,b}, J. Rua^{a,b}, A. Dias^c and A. Almeida^{a,b}

^aInstituto Universitário Egas Moniz (IUEM), Egas Moniz Cooperativa de Ensino Superior, Caparica, Almada, Portugal; ^bCentro de Investigação Interdisciplinar Egas Moniz (CiiEM), Egas Moniz Cooperativa de Ensino Superior, Caparica, Portugal; ^cKinesioLab, Instituto Piaget, Campus de Almada, Portugal

ABSTRACT

Introduction: There is growing research regarding the influence of intra oral devices over sportive performance [1,2]. There is however an unclear definition of the intermaxillary relation during athletes activity and its influence upon the performance. This theme is absent across the scientific research and should be the starting key point on this kind of study. Our goal is to create and assess an experimental setup to determine the intermaxillary relation in surfers during take off - getting up on the surfboard.

Materials and methods: Ten male adults free surfers were invited for this study. We applied a standard questionnaire about intermaxillary relation during sports. Two possible setups were tested in terms of distance to capture the masticatory muscles in video of 5 take offs; we used a Cannon[®] 77D on a tripod first at a distance of 1 m from a white tape placed on the floor perpendicularly to the body of the surfer facing down, where both hands were placed while he was laying on the ground ready for take off. Then we gave them a signal to execute the takeoff and all was recorded on video for posterior slow motion analysis. The exact same procedure was done a second time for a distance of 2 metres. This case series study was approved by the Egas Moniz Ethical Committee and each patient signed previously an informed consent. All the assumptions of the Helsinki Declaration have been fulfilled.

Results: Comparing the 2 setups, it was unclear, in terms of image analysis, the setup with the 1 m distance, becoming clear, in terms of muscle contraction, the 2 metres distance. Even so, the comparison between the standard questionnaire about intermaxillary relation and the video captured is highly variable and somewhat confusing, presenting some analysis limitations, giving us a clear notion that we need another mean of instrumental analysis about the intermaxillary position of the surfers.

Discussion and conclusions: It is clear to us the high variability of the intermaxillary position of athletes during take off as the lack of self perception on their practice. It is mandatory to design a setup to have an instrumental analysis like electromyography to confirm masticatory muscle contraction and validate the possible influence or relation between intermaxillary relation and sportive performance.

CONTACT Francisco Santos  franciscosantos.em@gmail.com

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Vanessa Machado^{a,b}, João Botelho^{a,b}, Luís Proença^c, Ricardo Alves^{a,b}, Maria Alzira Cavacas^b, Luís Amaro^{d,e} and José João Mendes^b

^aPeriodontology Department, Clinical Research Unit (CRU), Centro de Investigação Interdisciplinar Egas Moniz (CiEM), Egas Moniz-Cooperativa de Ensino Superior, Caparica, Portugal; ^bClinical Research Unit (CRU), Centro de Investigação Interdisciplinar Egas Moniz (CiiEM), Egas Moniz Cooperativa de Ensino Superior, Caparica, Portugal; ^cQuantitative Methods for Health Research (MQIS), Centro de Investigação Interdisciplinar Egas Moniz (CiiEM), Egas Moniz Cooperativa de Ensino Superior, Caparica, Portugal; ^dHealth Centers grouping (HCG) Almada-Seixal, Regional Health Administration of Lisbon and Tagus Valley (RHAlTV), Portugal; ^eHospital Garcia de Orta, Almada, Portugal

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 MMPPI 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.

CONTACT Vanessa Machado  vmachado@egasmoniz.edu.pt

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Evaluation of postoperative pain in patients submitted to periodontal surgeries

José Maria Cardoso^a, Miguel Ribeiro^b and Ricardo Alves^a

^aPeriodontology Department, Instituto Universitário Egas Moniz (IUEM), Egas Moniz Cooperativa de Ensino Superior, Caparica, Portugal; ^bDepartment of Dental Medicine, Instituto Universitário Egas Moniz (IUEM), Egas Moniz Cooperativa de Ensino Superior, Caparica, Portugal

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