



Assessment of the relationship between oral health-related quality of life (OHRQoL) and dental malocclusion in a Portuguese sample

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ABSTRACT

Introduction: According to the American Heart Association (AHA) the cardiac conditions with the highest risk of infective endocarditis (IE) for which antibiotic prophylaxis (AP) is reasonable are: prosthetic cardiac valves, previous IE, congenital heart disease and cardiac transplantation recipients [1,2]. The aim of this study was to analyse the knowledge of AP in Dental Medicine students.

Materials and methods: A prospective and analytical study was conducted using a questionnaire designed to describe the knowledge of AP and covering issues such as: AP guidelines, dental procedures and medical conditions needing AP, and recommended antibiotics. A 0–10 score was attributed to the questionnaire and the correct answers were based on AHA guidelines. The questionnaire was applied to students of the two last curricular years (4th and 5th year) of a Master in Dental Medicine and to newly graduated trainees at a University Dental Clinic – both in the Greater Lisbon area. The questionnaire was authorised by the students through a declaration of informed consent. This study was authorised by the Clinical Director of CDEM and approved by Egas Moniz Ethics Committee.

Results: A total of 275 questionnaires were obtained with an answer rate of: 93.8%/4th year ($n = 135$), 84.5%/5th year ($n = 120$) year and 57.1%/trainees ($n = 20$). The median score of the questionnaire was 6.0, 6.4 and 6.8 for 4th and 5th year students and trainees, respectively. The results were more satisfactory regarding: guideline existence knowledge, high-risk conditions recommended for AP and antibiotic selection in non beta lactam allergic patients. Unsatisfactory answers were related to: dental procedures in need of AP, heart conditions associated with IE, and antibiotic selection in beta lactam allergic patients. Noteworthy, antibiotic selection and dental procedure knowledge was significantly better in postgraduates.

Discussion and conclusions: The knowledge of the undergraduates and newly graduates concerning AP for dental procedures was not totally satisfactory, however there was a positive evolution according to the academic degree. As pharmacology subjects are taught in the early years of the course, antibiotic therapeutics should be reinforced later during the study cycle, and students should be made aware of the importance of a rational and adequate use of antibiotics in dental practice. There is a need to improve the knowledge and communication over this topic not only among undergraduates but also regarding postgraduates, in order to encourage clearer and more homogeneous antibiotic prescription patterns.

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Assessment of the relationship between oral health-related quality of life (OHRQoL) and dental malocclusion in a Portuguese sample

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ABSTRACT


Introduction: The assessment of the oral health-related quality of life (OHRQoL) and dental malocclusion are described in the literature and the results indicate a decrease in OHRQoL when clinically determined dental malocclusion severity

increase [1,2]. However, there is still a lack of information for the Portuguese population for this issue. This exploratory study aimed to evaluate the relationship between patient perception of OHRQoL and the severity of dental malocclusion in a Portuguese sample.

Materials and methods: This work was approved by the Egas Moniz Ethics Committee. This cross-sectional observational study involved patients that sought orthodontic treatment between January and April 2019, at the Orthodontic Care Consultation of Egas Moniz Dental Clinic (Monte de Caparica – Almada, Portugal). Exclusion criteria were patients with severe diseases, craniofacial abnormalities, cognitive deficits, caries, periodontal diseases, and previous orthodontic treatment history. A total of 19 patients were enrolled in the study. OHRQoL was assessed by application of the Oral Health Impact Profile – Portuguese validated version (OHIP-14) [3] and dental malocclusion through the Index of Complexity, Outcome and Need (ICON) [4]. Based on the ICON score, patients were categorised as: in need of treatment (ICON > 43) or not (ICON ≤ 43). Resulting data were submitted to descriptive and inferential statistical analysis.

Results: The sample included 7 (37%) males and 12 (63%) females, with a mean age of 27.9 years. Overall OHIP-14 score ranged from 0 to 49 and ICON score from 13 to 75 (9 (47.4%) subjects with ICON > 43 and 10 (52.6%) with ICON ≤ 43). Total OHIP-14 score and all seven median domain scores were not found to be significantly different ($p = .113$ to $p = .968$), when comparing both groups.

Discussion and conclusions: OHRQoL was not found to be significantly different when considering the severity of dental malocclusion. Overall, results highlight a difference between patients' self-perception of clinical condition impact in OHRQoL when compared to a clinical expertise judgement.

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Bacteriophage isolation from human saliva: a pilot study with high school students

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ABSTRACT

Introduction: The microbiome of the human oral cavity is composed of numerous and diverse bacteria, archaea, eukarya and viruses [1]. Bacteriophages (abbreviated phages) are bacterial viruses that can attack and kill a target bacterium within minutes of infection. Very little is known about the impact of phages on the ecology of the oral microbiome and the aetiology of diseases of the oral cavity [2]. The lytic capacity of some phages suggests, that this may be promising antimicrobial agents that could be used to prevent or treat oral diseases [3]. The study aimed to isolate bacteriophages specific for *Streptococcus mutans* (causal agent of dental caries) and *Enterococcus faecalis* (causative agent of persistent apical periodontitis) from human saliva with the engagement of high school students in scientific research.

Materials and methods: Saliva samples were collected from 61 healthy donors, undergraduate students from Valsassina College, Lisbon, Portugal. All samples were examined for the presence of phages using the agar overlay method. The study was approved by the Egas Moniz Ethics Committee (approval number 636) and written informed consent was obtained from all subjects.

Results: Three to five days after inoculation with *E. faecalis*, uniform turbid lysis zones were generated by saliva samples collected from 6 of 61 individuals (9.8%). No plaques for *S. mutans* were evident after direct plating of the material.

Discussion and conclusions: It was possible to isolate *E. faecalis*, but not *S. mutans* bacteriophages. Our data is similar in prevalence to previous studies who also attempted to isolate lytic bacteriophage from oral *E. faecalis* [4]. The presence