

AIM: Several reviews have been published on the effects of medication on tooth movement. This study aimed to synthesize the effect of some of the main drugs on tooth movement.

MATERIALS AND METHOD: A review, using PubMed (1992-Oct 2011), on the effects of medication and dietary supplements on orthodontic tooth movement was carried out.

RESULTS: Ibuprofen, acetylsalicylic acid, flurbiprofen, thiazide diuretics, ipriflavone, progestogens, fluorides and calcium reduce tooth movement. Anabolic steroids, PGI₂, PGE₂, PGE₁, misoprostol, vitamins D3, K2 and D and corticosteroids stimulate tooth movement. Rofecoxib, acetaminophen, polyunsaturated fatty acids and prednisone seem not to affect tooth movement.

CONCLUSION: At the beginning of orthodontic treatment it is important to know the medication that the patient is taking and how it affects treatment.

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TONGUE IMPACT ON A MIDPALATAL DEVICE IN CHILDREN

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AIM: To describe total tongue impulse and contact time during repeated swallowing of children in the mixed dentition to obtain clinically relevant information about the vertical impulse transfer of the tongue onto a palatal appliance.

SUBJECTS AND METHOD: Twelve children of different ethnic backgrounds (5 males, 7 females; aged 6–10 years). Along the palatal raphe, centred between the first molars, a plastic button was attached parallel to the occlusal plane at a 5 mm distance to the palate on a 0.5 mm thick splint. A miniature pressure transducer was fixed to the plastic button. Each child drank five cups filled with 10 mL of water during one recording run. This was repeated four more times for a total of five recording runs and 25 cups of water for each child. This procedure of five runs was again repeated one to four weeks later. The time interval δt_k when the impulse transfer to the button via the tongue was above the baseline, then the integrals of the force $F(t)$ over these time intervals and finally the total impulse transfer during a recording run as well as the duration during which the tongue transferred an impulse to the appliance were determined.

RESULTS: There was a considerable variation in the means of impulse transfer and duration of contact time during positive pressure of the tongue on the button. Even the same child did not have repeatable impulse transfers on both days,

and the standard deviations were very large. The total duration of contact time also varied considerably.

CONCLUSION: Total impulse transfer by the tongue during a recording run varies enormously between children (interindividual) and also on different days within the same child (intraindividual).

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FEASIBILITY OF REUSING ORTHODONTIC BANDS AFTER INTRAORAL USE – CONTROL OF CROSS INFECTION

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AIM: To evaluate the effectiveness of two methods of sterilization and disinfection of orthodontic bands, after use in the mouth. Simultaneously, the protocol of the Department of Orthodontics, Dental Faculty, Oporto University (DO-DFOU) was tested.

MATERIALS AND METHOD: Thirty-five orthodontic bands were placed on the first molars of 10 individuals. They were removed from the mouth and five were separated for the positive control. The remaining 30 bands were immersed in an ultrasonic bath with disinfectant (Elusept®) for 15 minutes and then divided into three groups. The first served as disinfection control, the second and third were subjected to additional sterilization with dry heat (210°C, 30 minutes) and steam (121°C, 33 minutes), respectively. The third group simulated the protocol of the DO-DFOU. Finally, each band was placed in a phosphate buffer saline solution to remove adherent microorganisms and the resulting suspension was inoculated in a nutrient agar. The number of colony-forming units (CFU) was observed in each plate after 4 days of incubation at 37°C. In order to relate the results and meet the international standards, a literature search was performed of the PubMed database using the keywords: cross infection control, orthodontics, orthodontic bands, decontamination, sterilization, disinfection. Twenty-five articles and two books were selected.

RESULTS: The samples used as positive controls presented a high number of CFUs while those that underwent different disinfection treatments did not show CFUs.

CONCLUSION: Considering the methodology used, based on the study of bacterial life forms and that all guidelines for decontamination have been strictly applied, all decontamination methods have proved to be effective and the DO-DFOU protocol is safe. Therefore orthodontic bands can be reused taking into account the guidelines for decontamination.