

OP19 COULD COMMON PRESCRIPTION MEDICATION AFFECT ORTHODONTIC TOOTH MOVEMENT? A SYSTEMATIC REVIEW

Miltiadis Makrygiannakis, Eleftherios G. Kaklamanos, Athanasios E. Athanasiou, Hamdan Bin Mohammed College of Dental Medicine, Mohammed Bin Rashid University of Medicine and Health Sciences, Dubai, United Arab Emirates

AIM: The recently documented increasing use of prescription medication across the age spectrum in developed countries could constitute a confounding factor in influencing orthodontic treatment. The aim of this study was to investigate whether frequently prescribed drugs may have an effect on orthodontic tooth movement (OTM) characteristics.

MATERIALS AND METHOD: A search without restrictions for published and unpublished literature and hand searching took place. Data from studies investigating the effect on various OTM characteristics of the most commonly prescribed medication according to the United States 2012 National Ambulatory Medical Care Survey (excluding analgesics) were reviewed.

RESULTS: The initially identified records were finally reduced to 18 studies conducted on animals. An increase in the rate of OTM was observed after administration of Vitamin D and thyroid hormones. Reduction in the rate was demonstrated in studies investigating proton pump inhibitors, angiotensin II receptor antagonists, antihistaminic drugs and anti-hyperlipidemic agents. Inconsistent results were observed regarding the effects attributable to anti-depressants, beta-adrenergic blocking agents and adrenal cortical steroids. The overall quality of evidence was affected by important confounding factors such as dosage and the chronic or acute nature of administration of the various substances.

CONCLUSIONS: Although not adequately investigated in humans, commonly prescribed drugs may have the potential to modify OTM. Prescription, as well as non-prescription, medication and dietary supplements should be an integral and important part of medical history monitoring not only when planning but also during the course of orthodontic treatment.