

CFAO Graduate Student Posterboard Abstracts

University of Alberta

EFFECT OF LOW INTENSITY PULSED ULTRASOUND ON ORTHODONTICALLY INDUCED ROOT RESORPTION: m-CT VOLUMETRIC ANALYSIS

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Introduction: Low Intensity Pulsed Ultrasound (LIPUS) could potentially be used as an adjunct therapy to arrest root resorption.

Aim: To investigate the effect of therapeutic Low Intensity Pulsed Ultrasound (LIPUS) on orthodontically induced tooth root resorption (OIRR).

Materials and Methods: Mandibular fourth premolars were moved bodily in the space of extracted third premolars in five adult beagle dogs in a split mouth design. Continuous orthodontic force of 100 gm was maintained for four weeks. The test side received LIPUS daily for 20 minutes. Blocks involving the fourth premolar and the periodontal tissue were scanned using Skyscan 1076 Micro-CT imager (resolution of 9 μm). Volumetric analysis was done on blinded reconstructed raw images to measure the volume, number, distribution of the resorption lacunae. The percentage of root resorption was compared to the total root volume.

Results: Volumetric analysis showed a statistically significant difference between the LIPUS and control sides in all variables. The LIPUS side had less resorption volume with a mean difference of 21.6 μm^3 ($p = 0.041$); also the percentage of OIRR was less by a mean difference of 9.95 % ($p = 0.029$). The total number of the resorption lacunae was less in the LIPUS side with a mean difference of 29.6 ($p = 0.035$).

Discussion: Daily application of LIPUS for 20 minutes to orthodontically treated teeth had a preventive effect against OIRR without adverse effect on the orthodontic movement rate.

Conclusion: LIPUS shows a potential preventive effect against OIRR.

CANADIAN WOMEN IN ORTHODONTICS AND WORK-FAMILY BALANCE: CHALLENGES AND STRATEGIES

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Introduction: Despite the dramatic increase in the number of females entering the orthodontic profession, there is little published literature on female orthodontists and work-family balance.

Aim: Explore work-family balance among Canadian female orthodontists.

Methods: A qualitative study obtained data from semi-structured telephone interviews. A purposive sample of thirteen Canadian female orthodontists was chosen based on age, marital status, presence of children, geographic region and practice type.

Results: Canadian orthodontists defined balance in terms of having success and satisfaction in both their personal and professional lives, and understanding the requirements of compromising and prioritizing. Adaptations to both the maternal and professional roles are discussed and areas of role conflict are identified.

Discussion: The participants discussed the specific challenges of work-family balance in orthodontic practice which included: scheduling issues; dependence on referrals; large amounts of paperwork; and lack of professional support. Six areas of adaptation to the maternal role included: timing of children; maternity leave; breastfeeding; employing a support system; segregation from other mothers; and personal and relationship time. Four areas identified as adaptations to the professional role were: changes to practice structure; modifications to the practice during maternity leaves; cutting back days; and reassurance of referrals. Finally, participants identified four areas where they experienced the most role conflict: timing of children; maternity leaves; breastfeeding; and caring for a sick child.

Conclusions: The issue of work-family balance is of paramount importance to the women interviewed. Challenges are identified and strategies presented.