HA008 Effects of photobiomodulation on the masseter of children with spastic cerebral palsy: a pilot study
Santos MTB*, Pedrake B, Silva KJ, Ortega AO*, Maciel SC
UNIVERSIDADE CRUZENHO DO SUL.
E-mail: drsantosmtb@yahoo.com.br
This longitudinal study on 20 children with spastic type cerebral palsy (CP), followed by the Association for the Care of Disabled Children (Associação de Assistência à Criança Deficiente - AACD), evaluated the effect of photobiomodulation laser on the thickness of their masseters. The Laser Group (LG) comprised 10 children with complaints of mouth opening restriction and difficulty in performing oral hygiene; the non-Laser Group (nLG) comprised 10 children with no restriction. LG was submitted to six infrared laser applications: LED, low intensity, As-Ga-Al, at 630 nm, 120 mW, by MMOPtics Tum Flex Evolution laser; using 20 J/cm2 of energy/dose and 20 s of exposure/site, at 7-day intervals. Masseter muscle thickness was measured using an ultrasound (920 mm ultrasound equipment - SIEMENS). LG was assessed before any application and after six sessions, while the nLG was assessed twice, at 7-day intervals. The t tests for dependent and independent samples were used, at a 5% significance level. The groups were similar in sex and age, though differences (p<0.003) were verified for the clinical form of CP; LG with teratogenic showed greater values. The thickness of the right masseter before (8.9±2.3) and after (9.9±2.9) six laser applications differed significantly (p=0.039), as did the left (9.1±1.9, 9.7±1.6; p=0.023). Masseter muscle measurements of nLG and LG after six weeks showed no significant difference (right: p=0.484; left: p=0.389).
Photobiomodulation has a positive effect, as verified by the increase in thickness of the spastic masseter muscles. (Apexo: Fundação de Amparo à Pesquisa do Estado de São Paulo - Processo 2014/15662-1)

HA009 The osteoprotective effect of estrogen receptor alpha in maxillary bone
Maciel SY, Sharma LA, Szweda RE, Dias GJ, Silva TA
Clinica, Patologia e Cir - UNIVERSIDADE FEDERAL DE MINAS GERAIS.
E-mail: soriaamaciel@hotmail.com
Introduction: Estrogen deficiency results in systemic bone loss. However, the contribution of estrogen receptor alpha (ERα) in the maintenance of alveolar bone microarchitecture and underlying mechanisms were not defined yet. Methods: 8-10 weeks old females and males homografted ERα-/- (wild type - WT) and ERα+/- (ERKO) mice were submitted to mechanical loading-induced bone remodeling by using an orthodontic appliance to promote tooth movement (OTM). The maxillary bone samples were analyzed using microCT, qPCR and energy dispersive spectroscopy (EDS). Bone marrow cells (BMC) from WT and ERKO mice were isolated and differentiated in osteoblasts and osteoclasts. Results: Both female and male ERKO demonstrated an osteoporotic phenotype in the femur and vertebrae. Maxillary alveolar bone loss and OTM were significantly augmented in ERKO mice and associated with decreased area percentage of bone and increased expression of IL-11 in the periodontium. In vitro osteoblasts and osteoblast differentiation was significantly higher in BMC from ERKO than WT mice. In conclusion, we provided herein evidence for the first time that estrogen receptor alpha (ERα) is involved in the osteoprotective effect of estrogen receptor alpha bone, ERα also protects femur and vertebrae from bone loss, either in female or male mice. ERα effects might be related to local production of IL-11, but seems independent of RANK/RANKL. ERα has yielded osteoestrogenosis down-regulation which contributes to bone protection. (Apexo: CAPES - PDE56123F13-8)

HA010 Effect of bioactive primers on dentin-adhesive interface
Sousa ABS*, Bedran-Russo A, Pires-de-Souza FCP
Materiais Dentários e Próteses - UNIVERSIDADE DE SÃO PAULO - RIBEIRÃO PRETO.
E-mail: bia_abss@hotmail.com
Recently, it was reported that the degradation of dentin matrix by metalloproteinases (MMPs) could affect the adhesive interface stability. Thus, searching for better results in the longevity of adhesive restorations, the aim of this study was to evaluate the effect of bioactive primers (chlorhexidine - CHX, grape seed extract - GSE, doxycycline - DOXY) on bond strength (BS) values were not influenced by the use of bioactive primers (chlorhexidine - CHX, grape seed extract - GSE, doxycycline - DOXY) on bond strength (BS) of resin composite restorations submitted to load cycling (LC). For this, cavities were prepared in 48 healthy human molars. Then, it was separated into 4 groups according to the adhesives tested and conditions of the dentin. The new ‘universal’ adhesive can be used in both strategies, irrespective of the substrate, without the concern of jeopardize the restorative procedure to perform minimal invasive resin composite restorations.

HA011 A new perspective of bonding agents
Nicoloso GF*, Antoniazzi BF, Sávio FZA, Rocha RO
UNIVERSIDADE FEDERAL DE SANTA MARIA.
E-mail: nicoloso_sma@hotmail.com
This study evaluated the bond strength of the adhesive ScotchBond Universal Applied either in etch-and-rinse or self-etch strategies compared to Adper Single Bond 2 and Clearfil SE Bond in two different conditions of dentin (sound and demineralized) commonly observed in minimal invasive restorations. Forty-eight sound human third molars had mid-coronal dentin surfaces exposed by removing the occlusal third. Twenty-four molars were submitted to pH-cycling to create demineralized dentin, and the other half remained intact until the bonding procedure. Eight groups (n = 6) were created according to the adhesives tested and conditions of the dentin. After bonding procedures, a composite core was build up to a height of 4-mm and then was sectioned perpendicular to the adhesive interface in order to obtain rectangular sticks (0.8 mm width), that were submitted to microtensile tests (1mm/min). Two-way ANOVA and post-hoc Tukey’s test (p = 0.05) were performed as statistical analysis. Lower bond strength values were obtained to demineralized dentin (p = 0.000), irrespective of the adhesive stratagy evaluated. ScotchBond Universal in both strategies evaluated had similar bond strength values to both compared adhesives (p > 0.07). A higher number of premature failures (22%) were observed in groups that the bonding procedure was performed in demineralized dentin. The new ‘universal’ adhesive can be used in both strategies, irrespective of the substrate, without the concern of jeopardize the restorative procedure to perform minimal invasive resin composite restorations.