ABSTRACTS

OF LECTURES AND SCIENTIFIC POSTERS

EUROPEAN ORTHODONTIC SOCIETY 93rd Congress Montreux, Switzerland, 2017 5-10 June FGFR3 but also factors involved in cartilage differentiation are expected to be complicatedly related. In this study, how fluvastatin regulates the autonomous progression of chondrocyte multistage differentiation programme using ATDC5 clonal cell line, derived from mouse EC (Embryonal Carcinoma) were examined.

MATERIALS AND METHOD: ATDC-5 Cells were cultured for a maximum of 21 days. For cell proliferation assay WST-1 was used and for cell staining Alcian Blue, Alizarin Red and alkaline phosphatase staining. The real-time polymerase chain reaction method was used on day 1 to 3 and days 7, 14 and 21 with several primers. For statistical processing, multiple tests were performed using the Tukey-Kramer test.

RESULTS: Cartilage formation was comparable by the addition of statin, although ATDC5 calcification was suppressed. However, when the mRNA expression level was considered, statin acted on the differentiation of cartilage, as the expression level of Col2a1, which is a cartilage substrate, also increased. In SMO and Ptch1, contradictory mRNA expression was observed. An increase in transcription factors such as Sox9, Runx2, which are at the downstream of the Ihh pathway via Gli, also occurred.

CONCLUSIONS: It is suggested that fluvastatin has an effect on Ihh and PTHrP, which are important factors in endochondral ossification. Especially since Ihh undergoes palmitoylation and cholesterol modification, there is a possibility that fluvastatin affects its suppression, activity enhancement and diffusibility. It is considered that expression of PTHrP is increased and apoptosis due to FGFR3 increased activity is suppressed.

219 THE EFFICACY AND EFFECTIVENESS INDUCED BY DIODE LASER BIOSTIMULATION ON THE RATE OF ORTHODONTIC TOOTH MOVEMENT

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AIM: Reduced treatment duration and adverse events such as discomfort, pain and external apical root resorption are important factors for care providers and orthodontic patients. The diode laser has been indicated to have the capability to facilitate the differentiation of osteoclastic and osteoblastic cells which could be responsible for the bone remodelling process and the rate of orthodontic tooth movement (OTM). The aim of this study was to evaluate of the efficacy of low-intensity laser therapy (LILT) in reducing orthodontic treatment duration and pain.

SUBJECTS AND METHOD: In this randomized split-mouth double blind clinical trial, 18 patients aged 14 to 25 years (mean 16.2 \pm 3.32 years), who required canine retraction following four first premolars extraction, were selected. The diode laser (Wiserlaser Doctor Smile; Lambda SPA, Brendola, VI, Italy), set at 980 nm, 100 mW, 5.6 J/cm², three points from the buccal side and three from lingual side of the tooth, 58 seconds, running in continuous mode, was used for canine retraction in the test maxillary quadrant. The other maxillary quadrant served as the control using the laser pseudo-application. Laser irradiation was applied on days 0, 7, 14, 21 and 28 of each month during the canine retraction phase. Canine retraction was done using a closed coil spring with a force of 150 g after alignment and levelling.

RESULTS: Although the mean rate of canine retraction was higher in the test (0.95 mm) than the control group (0.62 mm) at 28 days and there was a tendency for more canine retraction in the test group, there was no significant difference between the mean rate of canine retraction in either group (P = 0.066).

CONCLUSIONS: LILT is a good option to reduce treatment duration even if there were no clinically statistically significant changes in the rate of the OTM during the early phase of orthodontic treatment.

220 FACIAL ASYMMETRY IN SKELETAL CLASS III PATIENTS TREATED WITH ORTHODONTIC-ORTHOGNATHIC SURGERY

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93rd Congress of the European Orthodontic Society Montreux Switzerland June 5–10, 2017

CERTIFICATE OF ATTENDANCE

This is to certify that

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presented a poster at the 93rd Congress of the European Orthodontic Society, which took place in Montreux, Switzerland from the 5th until the 10th of June 2017.

Christos Katsaros EOS President