*ANGLE ORTHODONTIST



An International Journal of Orthodontics and Dentofacial Orthopedics

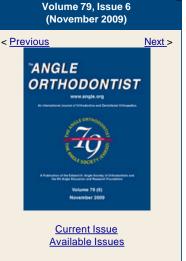
HOME JOURNAL SUBSCRIBERS AUTHORS REVIEWERS SOCIETY RELATEDLINKS HELP

Quick Search

Quion Couron

Home > The Angle Orthodontist > November 2009 > MMP-2, MMP-9, and iNOS Expression in Human Dental Pulp Subjected to Or...

Advanced Searc



◆Previous Article Volume 79, Issue 6 (November 2009) Next Article ▶

Add to Favorites
Share Article
Export Citations Track Citations Permissions

Full-text_

PDF

Angelo Leone, Annamaria Mauro, Giovanni Francesco Spatola, Salvatore Provenzano, Carola Caradonna, Aldo Gerbino, Maria Buscemi (2009) MMP-2, MMP-9, and iNOS Expression in Human Dental Pulp Subjected to Orthodontic Traction. The Angle Orthodontist: Vol. 79, No. 6, pp. 1119-1125.

Original Article

MMP-2, MMP-9, and iNOS Expression in Human Dental Pulp Subjected to Orthodontic Traction

Angelo Leone^a, Annamaria Mauro^b, Giovanni Francesco Spatola^c, Salvatore Provenzano^d, Carola Caradonna^e, Aldo Gerbino^f, and Maria Buscemi^f

Abstract

Objective: To test the hypothesis that some metalloproteinases (MMP-2, MMP-9) and inducible nitric oxide synthetase (iNOS) enzymes in dental pulp samples do not vary when subjected to orthodontic treatment.

Materials and Methods: Human dental pulps were taken from male and female patients (N=10; age 10–14 years). A straight wire technique was used with nickel-titanium or steel archwires. The increase of pressure applied on teeth was gradual. Five patients were subjected to premolar extractions after 14 months of treatment and one after 24 months. Samples were Bouin-fixed, paraffin-embedded, and afterwards processed for immunohistochemistry using anti-MMP-2, anti-MMP-9, and anti-iNOS antibodies.

Results: A reduction of MMP-2, MMP-9, and iNOS expression occurred in treated samples. This became more evident with increased treatment time

Conclusion: The hypothesis is rejected. The reduction of expression of those proteins revealed a time-dependent relationship.

Keywords: Immunohistochemistry, Dental pulp, MMP-2, MMP-9, iNOS

Accepted: November 2008;

^a Lecturer, Department of Experimental Medicine, University of Palermo, Palermo, Italy

^b Research Fellow, Department of Experimental Medicine, University of Palermo, Palermo, Italy

^c Research Scientist, Department of Experimental Medicine, University of Palermo, Palermo, Italy

^d Undergraduate student, Department of Experimental Medicine, University of Palermo, Palermo, Italy

^e Research Scientist, Department of Dental Sciences, University of Palermo, Palermo, Italy

^f Professor, Department of Experimental Medicine, University of Palermo, Palermo, Italy

Corresponding author: Dr Angelo Leone, Department of Experimental Medicine, Università di Palermo, Via del Vespro, 129 Palermo, 90127, Italy (aleone.istologia@unipa.it)



Journal Information

ISSN: 0003-3219 Frequency: Bimonthly

Register for a Profile

Not Yet Registered?

Benefits of Registration Include:

- A Unique User Profile that will allow you to manage your current subscriptions (including online access)
- The ability to create favorites lists down to the article level
- The ability to customize email alerts to receive specific notifications about the topics you care most about and special offers

Register Now!

Related Articles

Articles Citing this Article

Google Scholar

Search for Other Articles By Author

- € Angelo Leone
- € Annamaria Mauro
- € Giovanni Francesco Spatola
- Salvatore Provenzano
- € Carola Caradonna
- € Aldo Gerbino
- € Maria Buscemi

Search in:

jo Angle Online

Search



top 🛎

© 2010 The E. H. Angle Education and Research Foundatio

Allen Press, Inc. prints The Angle Orthodontis

Allen Press, Inc. assists in the online publication of The Angle Orthodontis

Technology Partner - Atypon Systems, Inc.