CONSORT Randomized Clinical Trial

Effect of Occlusal Reduction on Postoperative Pain in Teeth with Irreversible Pulpitis and Mild Tenderness to Percussion
Masoud Parirokh, Ali Reza Rekabi, Rezvan Ashouri, Nouzhar Nakhaei, Paul Vincent Abbott, Hedayat Gorjestani

Efficacy of Articaine versus Lidocaine in Block and Infiltration Anesthesia Administered in Teeth with Irreversible Pulpitis: A Prospective, Randomized, Double-blind Study
Hengameh Ashraf, Majeed Kazem, Omid Dianat, Fatemeh Noghrehkar

Review Article

Comparison of Fracture Resistance between Cast Posts and Fiber Posts: A Meta-analysis of Literature
Lili Zhou, Qing Wang

Clinical Research

Pixel Intensity and Fractal Dimension of Periapical Lesions Visually Indiscernible in Radiographs
Elif Soğur, B. Güniz Baksi, Hans-Göran Gröndahl, B. Hakan Şen

Treatment Outcome of Mineral Trioxide Aggregate in Open Apex Teeth
Johannes Mente, Meltem Leo, Dimos Panagidis, Marc Ohle, Sven Schneider, Justo Lorenzo Bermejo, Thorsten Pfetterle

Occurrence of Cervical Invasive Root Resorption in First and Second Molar Teeth of Orthodontic Patients Eight Years after Bracket Removal
Andrea Thönen, Timo Peltomäki, Raphael Patcas, Matthias Zehnder

Isolation and Characterization of Dental Pulp Stem Cells from a Patient with Papillon–Lefèvre Syndrome
Pakize Neslihan Taşlı, Sıdıka Taşpin, Sezín Demirel, Mehmet Emir Yalvaç, Serap Akyüz, Aysen Yarat, Fikrettin Şahin

Basic Research

Biology

Streptococcus gordonii Collagen-binding Domain Protein CbdA May Enhance Bacterial Survival in Instrumented Root Canals Ex Vivo
Peter J. Moses, Daniel A. Power, Amy M. Jesionowski, Howard F. Jenkinson, Eugene A. Pantera, M. Margaret Vickerman

Identification of the Genes Involved in the Biofilm-like Structures on Actinomyces oris K20, a Clinical Isolate from an Apical Lesion
Chiho Mashimo, Hiroyuki Kamitani, Takayuki Nambu, Kazuyoshi Yamanaka, Takeshi Yamanaka, Chieko Sugimori-Shinozuka, Toshiaki Tatami, Junichi Inoue, Maki Kamei, Shosuke Morita, Kai-Poon Leung, Hisanori Fukushima

Development of an Ex Vivo Coculture System to Model Pulpal Infection by Streptococcus anginosus Group Bacteria

Camphorquinone Inhibits Odontogenic Differentiation of Dental Pulp Cells and Triggers Release of Inflammatory Cytokines
Reuben H. Kim, Drake W. Williams, Susan Bae, Rachel S. Lee, Ju-Eun Oh, Shebli Mehrazarin, Tony Kim, Ki-Hyuk Shin, No-Hee Park, Mo K. Kang

Regulation of Matrix Metalloproteinases, Tissue Inhibitor of Matrix Metalloproteinase-1, and Extracellular
Metalloproteinase Inducer by Interleukin-17 in Human Periodontal Ligament Fibroblasts
Yan Wu, Lingxin Zhu, Hongxia Wei, Bin Peng

Calcium Ions Released from Mineral Trioxide Aggregate Convert the Differentiation Pathway of C2C12 Cells into Osteoblast Lineage
Sakurako Matsumoto, Makoto Hayashi, Yusuke Suzuki, Naoto Suzuki, Masao Maeno, Bunna Ogiso

Combined Effects of Simvastatin and Enamel Matrix Derivative on Odontoblastic Differentiation of Human Dental Pulp Cells
Lorena Karanxha, Su-Jung Park, Won-Jun Son, Jacques E. Nör, Kyung-San Min

Evidence Supporting a Protective Role for Th9 and Th22 Cytokines in Human and Experimental Periapical Lesions
Andrea Maria Fabio Aranha, Carlos Eduardo Repke, Thiago Pompermaier Garlet, Andreia Espindola Vieira, Ana Paula Campanelli, Ana Paula Favaro Trombone, Ariadne Letra, Renato Menezes Silva, Gustavo Pompermaier Garlet

**Technology**

Detection of Dentinal Microcracks Using Infrared Thermography
Manami Matsushita-Tokugawa, Jiro Miura, Yukiteru Iwami, Takahide Sakagami, Yui Izumi, Naoya Mori, Mikako Hayashi, Satoshi Imazato, Fumio Takeshige, Shigeyuki Ebisu

Comparison of the Self-Adjusting File with Rotary and Hand Instrumentation in Long-oval–shaped Root Canals
Jim E. Ruckman, Brian Whitten, Christine M. Sedgley, Timothy Svec

Comparative Evaluation of Fracture Resistance under Static and Fatigue Loading of Endodontically Treated Teeth Restored with Carbon Fiber Posts, Glass Fiber Posts, and an Experimental Dentin Post System: An In Vitro Study
Khetarpal Ambica, Kavitha Mahendran, Sangeeta Talwar, Mahesh Verma, Govindaswamy Padmini, Ravishankar Periasamy

Torsion and Bending Properties of Shape Memory and Superelastic Nickel-Titanium Rotary Instruments
Elizabeth Ninan, David W. Berzins

Cold Plasma Therapy of a Tooth Root Canal Infected with *Enterococcus faecalis* Biofilms In Vitro
Jie Pan, Ke Sun, Yongdong Liang, Peng Sun, Xiaohui Yang, Jing Wang, Jue Zhang, Weidong Zhu, Jing Fang, Kurt H. Becker

The Effect of Various Mixing and Placement Techniques on the Compressive Strength of Mineral Trioxide Aggregate
Fatima B. Basturk, Mohammad Hossein Nekoofar, Mahir Günaydın, Paul M. Dummer

Antimicrobial Activity of Triantibiotic Paste, 2% Chlorhexidine Gel, and Calcium Hydroxide on an Intraoral-infected Dentin Biomodel
Ronald Ordinola-Zapata, Clivios M. Bramante, Paloma Gagliardi Minotti, Bruno Cavallini Cavenago, Roberto Brandão Garcia, Norberti Bernardineli, David E. Jaramillo, Marco A. Hungaro Duarte

Effect of Apical Size and Taper on Volume of Irrigant Delivered at Working Length with Apical Negative Pressure at Different Root Curvatures
Cesar de Gregorio, Ana Arias, Natalia Navarrete, Veronica del Rio, Enrique Oltra, Nestor Cohenca

Time Required to Remove GuttaCore, Thermafil Plus, and Thermoplasticized Gutta-percha from Moderately Curved Root Canals with ProTaper Files
Robert T. Beasley, Anne E. Williamson, Bruce C. Justman, Fang Qian

Incidence of Apical Root Cracks and Apical Dentinal Detachments after Canal Preparation with Hand and Rotary Files at Different Instrumentation Lengths
Rui Lu, Anjali Kaiwar, Hagay Shemesh, Paul R. Wesselink, Benxiang Hou, Min-Kai Wu

Influence of Combined Cyclic Fatigue and Torsional Stress on the Fracture Point of Nickel-Titanium Rotary Instruments
Frank C. Setzer, Christian P. Böhme

**Case Report/Clinical Techniques**

Histological Findings of Revascularized/Revitalized Immature Permanent Molar with Apical Periodontitis Using Platelet-rich Plasma
Gabriela Martin, Domenico Ricucci, Jennifer L. Gibbs, Louis M. Lin
Unicystic Ameloblastoma Mimicking Apical Periodontitis: A Case Series
Rogério Oliveira Gondak, André Caroli Rocha, José Guilherme Neves Campos, Pablo Agustin Vargas, Oslei Paes de Almeida, Marcio Ajudarte Lopes, Alan Roger Santos-Silva