

3rd Euro Congress and Expo on

Dental & Oral Health

June 16-18, 2015 Alicante, Spain

Evaluation of biodentine as a furcation perforation repair material

Ceren Yildirim¹, Ozlem Marti Akgun¹, Bilal Ozmen², Suleyman Tekeli³ and Feridun Basak¹

¹Gulhane Medical Academy, Turkey

²Ondokuz Mayıs University, Turkey

³Gazi University, Turkey

The anatomical variations of root canals may cause furcation perforation during endodontic treatment. In the event of perforation, the area is covered with a repair material that provides a tight seal between the periradicular tissues and the oral environment. The aim of this study is to evaluate the success of Biodentine as a furcation perforation repair material. For this propose 50 cubic Biodentine samples (1cm³) were prepared. Five experimental groups were established: Group 1 (samples 1–10) was exposed to distilled water; Group 2 (samples 11–20) to 5.25% NaOCl; Group 3 (samples 21–30) to 17% EDTA; Group 4 (samples 31–40) to 2% CHX; and Group 5 (samples 41–50) to ozonated water. All samples were exposed to irrigating solution for 7 days and then they were washed with distilled water for five minutes. Next microhardness testing and surface roughness testing were applied to all specimens. The data were evaluated using SPSS 15.0 software. The significance level was set at 0.05. Microhardness values significantly differed among the groups ($P < 0.05$). Pairwise comparisons of microhardness values showed differences between the following groups: 1-2, 1-4, 1-5, 2-3, 2-5, 3-4, and 4-5. There were no differences between groups 1-3, 2-4, and 3-5. No statistically significant differences were observed in surface roughness among the groups ($P > 0.05$). In conclusion; Biodentine seems a good alternative to MTA and other furcation perforation repair materials. However, further research is needed to warranty endodontic usage of Biodentine.

Biography

Ceren Yildirim is currently appointed as Specialist doctor, Pediatric Dentistry Department, Central of Dental Sciences, Gulhane Medical Academy, Ankara, Turkey. She obtained her medical degree at Gazi University. She underwent her residency training in Pediatric Dentistry in 2009 to 2013 at Gulhane Medical Academy, Ankara, Turkey. She is now a DDS, Ph.D. in there. Her research interest includes minimal invasive dentistry, regenerative pulpal therapies, and preventive dentistry.

cerenk.yildirim@gmail.com

Notes: