microbial microleakage.

Method: In this experimental laboratory study, 87 single - rooted extracted human teeth were selected .The crowns were cut in such a way that the average root length was 15 mm. Apical preparation of the canal was performed up to #40 file(filing) and up to #80 file in the coronal areas (flaring) using the step back technique. The canals were copiously irrigated with 5.25 % sodium hypochlorite. After cleaning and shaping, the teeth were randomly divided to 5 groups: Three experimental groups of 25 teeth, a positive control group of 3 teeth and a negative control group of 9 teeth. Smear layer was removed with EDTA 17% and NaOCL 5.25%. And neutralization of the NaOCl was done by Na2S2O3 4%. Group 1 was obturated with gutta percha and AH26 sealer. Group 2 was obturated with gutta - percha and AH Plus Jet sealer and group 3 was obturated with gutta-percha and tgad seal sealer. The three positive control teeth were obturated with a single gutta-percha cone and the nine negative control teeth were obturated with gutta-percha and sealer. The surface of the roots was then covered by two layers of nail polish, except for the apical 2 mm of the teeth (in the negative control group, all the surfaces were covered by nail Polish). The roots were assembled in the system designed for this experiment for 48 hours in 100% humidity and 37C.

A fresh solution of enterococcus faecalis was injected to the system every 3 days. The samples were evaluated daily for 90 days and the time of culture contamination with enterococcus faecalis was registered in each case. The results were analyzed statistically by Kaplan-Meier, Chi-Square and Mann-Whitney tests.

Result: All of the samples in the positive control group were infected after 24 hours. None of the negative control samples were infected after 90 days. Time of contamination between groups showed no significant differences (P-value=0.611)

Conclusion: Because of tgad seal's comparable sealability to AH26 & AH Plus Jet root canal sealers & its appropriate cost, it can be recommended for use in root canal therapy.

Histopathologic Evaluation of the Subcutaneous Tissue Response to Three Endododontic Sealers in Rats

Hasheminia M*, Farhad AR, Razavi M, Feizi M

***Associate Professor of Endodontic Department, School of Dentistry, Isfahan University of Medical Sciences, Isfahan, Iran**

Aim: The aim of this study was to evaluate the subcutaneous biocompatibility of three root canal sealers in rats.

Method: 30 Wistar rats were divided into three groups according to three periods of time (15, 30 and 60 days). Sterilized polyethylene tubes filled with one of root canal sealers (AH Plus, Epiphany & Grossman) and one control empty tube were implanted into four separate regions of the dorsum of each rat. At the end of each study period 10 animals were sacrificed and histologic sections of connective tissue at the open ends of the tubes were prepared. Severity of tissue inflammatory response was assessed

Result: Grossman endodontic sealer had the most severe inflammatory response followed by AH Plus, Epiphany & control groups .The tissue inflammatory response of Epiphany and AH Plus sealers was not significantly different from each other.

Conclusion: Epiphany sealer has acceptable biocompatibility when tested on rat subcutaneous tissue.

Comparison of Obturation Density by Cold Lateral Condensation and Matched-Taper Single-Cone Technique in Straight and Curved Canals

Hatam R*, Aghili H, Kazemi A, Khedri P

***Resident of Endodontic Department, School of Dentistry, Shahed University of Medical**