

# INTERNATIONAL ENDODONTIC JOURNAL

The official journal of the British Endodontic Society and the  
European Society of Endodontology



European Society of Endodontology: Abstracts from the Biennial Conference  
7-10<sup>th</sup> September 2022 Budapest

View this journal online at <http://wileyonlinelibrary.com/journal/iej>

ISSN: 0143-2885

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**Conclusions:** Clinical outcome shows a high rate of survived and healed teeth with both type of instrumentations. Post-operative pain was higher in teeth treated with OneCurve continuous rotation than OneReci Reciprocating instruments.

R021 | Withdrawn

#### R022 | Effect of mtad on outcome of primary root canal treatment: A randomized controlled trial

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**Aim:** To compare the radiographic outcome of a root canal treatment with and without additional use MTAD solution after 24 months recall.

**Methodology:** One hundred single-rooted teeth with periapical radiolucency of 100 patients were randomized into two groups using a randomized block design with block sizes of 10 patients each. Root canals were prepared with Reciproc Blue and irrigation was performed with 5 ml 2.5% NaOCl during instrumentation. Final irrigation protocol was performed using 5 ml 2.5% NaOCl ( $n = 50$ ) or 5 ml MTAD ( $n = 50$ ). Then the root canals were irrigated with 5 ml of saline and obturated with gutta-percha and AH Plus sealer. Three patients were excluded due to pregnancy, systemic disease and use of medicament. The 97 patients were recalled and evaluated radiographically at 24 months according to PAI scores. Twenty-five patients were lost during follow-up period. Pre and post-treatment PAI scores were compared and teeth were considered 'healthy' (PAI  $\leq 2$ ) or 'diseased' (PAI  $\geq 3$ ). Mann-Whitney  $U$  test was used to compare the differences between the post-operative and follow-up images. Wilcoxon signed rank test was conducted to examine the changes in PAI score from base line to the follow-up evaluation.

**Results:** Seventy-two patients were re-examined 2 years after treatment. Overall, a statistically significant decrease in PAI score from the base line to the follow-up evaluation was seen in 65 of 72 teeth. Absence and reduction of the radiolucency together were observed in the MTAD group in 33 of 37 teeth (89.2%) and 32 of 35 teeth (91.4%) in the NaOCl group. There was no significant difference between the results of decrease in PAI score was seen in both groups ( $p = 0.551$ ).

**Conclusion:** Root canal treatments with and without MTAD irrigation contributed equally to periapical healing.

#### R023 | Clinical signs and symptoms of apical periodontitis: A prospective cohort study

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**Aim:** Assessment of effect of endodontic treatment on prevalence of clinical signs and symptoms of apical periodontitis (AP) among patients of private endodontic practice.

**Methodology:** Primary or secondary endodontic treatments were performed by single endodontist according to ESE guidelines (2006) in 1143 teeth of 654 patients. Before and 1–4 years post treatment (mean follow-up time 24 months), several clinical parameters were registered on every tooth (presence and nature of pain, swelling, sinus tract; periodontal parameters: gingival pocket depth, furcation involvement, and mobility of tooth; periapical involvement using palpation and percussion) and radiographic parameters (periapical index (PAI), lesion diameter) on every one of 2217 roots by single calibrated examiner. Pre- and post-treatment data were statistically analysed with paired-samples  $t$ -test, Wilcoxon signed-rank test, sign test, and McNemar's test,  $p$  was set at 0.05.

**Results:** A significant decrease was noted in proportion of painful teeth over the follow-up period from 51.3% to 5.0%. Prevalence of swelling and sinus tract decreased from 8.4% to 1.4% and 6.4% to 1.9%, respectively ( $p = 0.0005$ ). A significant decrease was observed in periapical involvement for both percussion (51.5% to 4.4%) and palpation (22.3% to 3.1%). Radiographic parameter PAI decreased in 44.7%, increased in only 3.7%, and remained unaltered in 51.6% of examined roots ( $p = 0.0005$ ). Majority of unchanged PAI was  $\leq 2$  and in only 12.9% of roots the PAI remained  $\geq 3$  after the treatment. There was 1.92 mm (95% CI 1.79–2.05) mean decrease in lesion diameter from 2.38 to 0.46 mm ( $p = 0.0005$ ). Periodontal parameters pocket depth, furcation involvement and mobility did not change significantly over the follow-up period.

**Conclusion:** The endodontic treatment significantly reduces prevalence of AP signs and symptoms - pain, swelling, sinus tract, periapical involvement, reduces the PAI score and lesion diameter, but does not affect the periodontal parameters of pocket depth, mobility, and furcation involvement.