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| ORIGINAL TITLE | A Clinical study to establish an appropriate root canal treatment method: one visit treatment with zinc oxide and eugenol as root canal cement  |
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| MAIN HEADING   | ENDODONTICS   |
| ABSTRACT       | <p>The standard root canal treatment carried out is beyond the reach of many patients in the developing countries, as it requires expensive materials and sophisticated equipment. As endodontic treatment is a highly skilled procedure, its success depends to a large extent on the application of proper and appropriate techniques. The purpose of this study is therefore to develop an alternative method of root canal therapy that is simple, inexpensive and less time consuming which will be more suitable for a developing country like Sri Lanka. A random sample was selected from patients those who has attended to the Dental Hospital for endodontic treatment. A total of 210 maxillary central and lateral incisors from 73 males and 63 females were included in the study sample. This included 103 vital and 107 non-vital teeth. Subjects who had acute symptoms such as pain and swelling, poor oral hygiene, radiological evidence of teeth with abnormal root canals such as calcified canals were excluded from the study. The endodontic procedure (both in vital and non-vital teeth) was carried out in twelve sub-groups categorized according to the vitality (Vital and Non-vital), technique (One visit and Multi-visit), cement (AH26 and Zinc Oxide/Eugenol) and drug therapy (Antibiotic and Placebo) used. Root canals were prepared using the step back technique and obturation was done using lateral condensation technique. Patients were reviewed at 3,6,9,12,24,36,48 and 60 month intervals. Success or failure rate was recorded using both clinical and radiological guidelines published by the American Association of Endodontists. The effect of endodontic success rate was studied in relation to gender, age, vitality, type of cement, type of technique, drug therapy, preoperative radiolucency, discharging sinus, cement extrusion, quality of filling, type of teeth and apical seal. Of the above variables only the apical seal showed a significant effect on the success rate of the root canal therapy. The present study shows that both techniques (One visit and Multi-visit) and cements used (Zinc Oxide/Eugenol and AH26) produce similar results in maxillary incisor teeth. The success rate of endodontic treatment procedure does not depend on the vitality of teeth and the drug therapy used. Endodontically treated teeth both with pre-operative periapical radiolucency and without pre-operative periapical radiolucency showed similar success rates although the former showed a slower healing process when compared to the latter. Maxillary lateral incisor showed higher failure rates</p> |

than the maxillary central incisor, which may be due to the apical curvature of the root canal in the lateral incisor. This shows that the step-back technique is not suitable for the teeth with curved roots, which is in agreement with earlier studies. It is suggested that a special root canal preparation and obturation technique to be adopted for the teeth with curved root canals.