Article Abstracts

*Compiled by : *Vinayak V*

Benenati WF. Treatment Of a mandibular molar with perforating internal resorption. J. Endod 2001;27: 474-475.

Internal root resorption is characterized radiographically by a disruption of the canal space, typically ovoid in appearance. The possible causes of this phenomenon include trauma to the tooth and inflammation from an infected coronal pulp, most often due to dental caries. For the process of resorption to take place, the pulp must be vital in the area of resorption. Hence the treatment consists of removal of the inflammed pulp. Most cases of internal root resorption are seen in anterior teeth due to their susceptibility to trauma but it may also be seen in posterior teeth due to carious involvement of the pulp.

Treatment of a perforating internal resorption calls for using either a surgical correction or using calcium hydroxide or other suitable material to form a hard tissue matrix against which to condense a permanent root canal filling. The latter is' often preferred as some defects may be difficult to access surgically because of their location.

A case report of a 33 year old patient is presented in which a previous partial root canal treatment on a mandibular molar developed internal resorption of the distal canal. The case was followed up at the University of Okhaloma Student Clinic and endodontic treatment was done in the mesial canal, with calcium hydroxide placed in the distal canal for 4 months due to pre existing perforation defect of the root surface. After completion of endodontics, a 17 month follow up film showed an osseous repair apically and also adjacent to distal root surface where a slight over extension of filling material was evident. A cast metal crown was then placed.This case report tends to present a treatment modality for retention ofotherwisequestionabletooth.

* Senior Resident
Deptt. of Dental Surgery,
All India Institute of Medical Sciences,
New Delhi-l 10 029.

Ferreira JJ, Rhodes JS and Pitt Ford TR. The efficacy of gutta-percha removal using Profiles. Int Endod J 2001;34:267-274.

The aim of root canal retreatment is to remove the existing root canal fillings completely, hence allowing the entire root canal system to be cleaned. The purpose of this study is to compare the efficacy of gutta-percha removal from the obturated root canals using Profiles in-vitro.

Forty-eight human root canals with curvatures ranging between 25 and 4.5 were instrumented by a standardized method to an apical ISO size 30 and 0.04 taper. They were obturated with vertically condensed gutte-percha. Then retreatment was performed with the following technique; K-flexofiles with chloroform, Hedstrom files with chloroform, Profiles 0.04 taper with chloroform, Profiles 0.04 taper alone. A microfocal macroradiographic technique was used to evaluate the amount of debris remaining within the root canals after the retreatment procedure. Roots were divided into apical, middle and coronal parts and scored on a scale of 0(no debris) to 3 (more than 50 % covered with debris)

The results showed that the scores for debris remaining within the root canals for K-Flexofiles with chloroform and Profiles with chloroform were the lowest and not significantly different at all the three levels of roots examined. Hedstrom files with chloroform and Profiles

with chloroform were not significantly different in the apical part.In general coronal parts were cleaner than apical parts. Also, the difference in scores at the three levels between Profiles with chloroform and Profiles alone were each significant.

This study indicates that Profiles or Hand files with chloroform produced similarly clean canals, but that Profiles were faster.

Filho* Tanomaru *M, Leonardo MR, Bonifacio KC, Dametto FR and Silva IAB. The use of ultrasound for cleaning the surface of stainless steel and Nickel-Titanium Endodontic Instrumen ts. Inter Endod J 200 1;34:58 l-585.

Quality control of endodontic equipment is necessary to ensure that they are manufactured according to specification. Compared to stainless steel files , Ni-Ti files have a number of advantages such as greater flexibility and resistance to plastic deformation and torsional fractures. Fragments or metallic residues on the active part of the tip of the endodontic files can become detached during use.These fragments or residues may obstruct the root canals or even reach periapical tissues during biomechanical preparation and should be removed before clinical use.

The aim of this study was to, evaluate the efficacy of ultrasound in cleaning the surface of stainless steel and Ni-Ti endodontic instruments. In this study 20 Ni-Ti instruments and 20 stainless steel k-files were removed from their original packages and evaluated using a scanning electron microscope (SEM). Scores were given for the presence of residues on the surface of the instruments. The instruments were then cleaned in an ultrasonic bath containing only distilled water or detergent solution for 15 minutes and re-evaluated using SEM.

The results showed that before cleaning greater amount of metallic debris was observed on the nickel-titanium Quantec instruments when compared to those made of stainless steel. Statistical analysis showed that the use of ultra sound was effective for cleaning the instruments regardless of the irrigating solution or the instruments type.

Loushine RJ, Weller NR, Kimbrough FW and Potter BJ. Measurement of endodon tic file lengths: Calibera ted versus uncalibrated digital images. J. Endod. 2001;27:779-781.

Although it is impossible to determine the exact canal length clinically, an accurate and reproducible estimation of the working length is essential for successful preparation and obturation of the apical third of the root canal system. Working lengths can be estimated using the following recommended methods: electronic, tactile, paper point, and radiographic.

This in - vitro study compared the accuracy of file length measurements made on calibrated and uncalibrated direct digital images. Endodontic files of known lengths and ISO sizes were used in 10 single rooted, relatively straight teeth within cadaver specimens. The crowns of the teeth were ground flat and an orthodontic wire of known length was secured to the coronal surface. This wire was placed mesiodistally and perpendicular to the root and served as the reference point for the file measurement and as a calibration reference length. A # 20 file was hand measured to a length that reached the apical third of each tooth. It was inserted and a radiographic image was secured.The instrument was remeasured three additional times at different lengths on the same tooth and reinserted before each image acquisition.The 40 digital images were acquired using a GE X-ray unit and a Schick Computed Dental Radiography (CDR)#2

sensor. These images were placed in random order, and an independent, blinded investigator determined the file lengths using on-screen calibrated and uncalibrated measurement of the CDR image with a straight-line and multiple-line measuring technique. The experimental measurements were compared with each other and with the known clinical measurements.

Results showed that with a two-way analysis of variance, there was a statistically significant difference showing that the calibrated measurements were more accurate than the uncalibrated measurements($p = 0.0001$), and there was no significant difference between the straight-line and multiple-line measuring techniques ($p = 0.14$).

International Federation of .Endodontic Associations (IFEA) Research Award 2002

The IFEA Endowment Research Fund was established in 1993 and provides an annual grant of $2000 (U.S.A) for the IFEA Research Award.The objectives of this award are:

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2. Title of research project.
3. Short introduction including updated information related to the project.
4. Research objectives.
5. Research design (details description).
6. Previous experience and/or publications of the investigators in the field.
7. Bibliography.
8. Budget required (in details)
9. Endowment letter from head of institute where research will take place.
10. An abstract of maximum 1.50 words of the project (on a separate page).

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All applications should be submitted by **November 30th 2002** to The Secretary, Indian Endodontic Society, C-l 97, Greater Kailash-I, New Delhi-l 10048