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Research Article

**COMPARISON OF PAIN SEVERITY PREOPERATIVELY AND  
POSTOPERATIVELY BETWEEN TWO SESSIONS OF ROOT  
CANAL TREATMENT**<sup>1</sup>Dr. Faizan Shahbaz Cheema, <sup>2</sup>Dr. Yasmeen Anwar, <sup>3</sup>Dr. Rubina Sheikh<sup>1</sup>Nishtar Institute of Dentistry, Multan<sup>2</sup>Punjab Dental Hospital, Lahore<sup>3</sup>Dental Section Punjab Medical College, Faisalabad**Abstract:**

**Objective:** The purpose of this analysis was to determine the severity of pain after two sessions of root canal treatment and to determine the relationship between pre-obturation and post-operative pain.

**Study Design:** A Quasi Experimental study.

**Place and Duration:** In the Operative Dentistry Department, Mayo Hospital, Lahore for six months duration from July 2017 to December 2017.

**Methodology:** Total Sixty patients were selected. The length of the study was determined by periapical radiography after the preparation. The canal was prepared using K-files using the Step-Back technique and the filling was made by lateral gutta-percha concentration. In the group where two visits were made, the preparation of the channel was completed on the first visit and the filling was carried out at a later date. Data were analyzed with SPSS version-13.0. Repeated measurement of variance analysis (ANOVA), Chi-square and Pearson correlation (r) values were considered significant  $p < 0.05$ .

**Results:** After 4 hours, the mean VAS in the visit group of the single root canal was  $4.7 \pm 2.96$  and  $2.8 \pm 1.73$  in the visit group. The mean VAS score of the two visits after 12 and 24 hours for postoperative pain was lower than that of a visit. The data showed a direct correlation in postoperative pain and obturation in both groups.

**Conclusion:** In the first 4 hours, root canal treatment was compared from the next visit to two sessions, but no advantage was observed when the root canal treatment from two visits provided better results in terms of pain Postobturation after 12 and 24 hours. Although this study showed positive results in the treatment of root canal of two visits related to postobturation pain.

**Key words:** visual analog scale, postobturation pain, preoperative pain, endodontic treatment with two visits, Endodontic treatment of a visit.

**Corresponding author:**

**Dr. Faizan Shahbaz Cheema,**  
Nishtar Institute of Dentistry,  
Multan

QR code



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**INTRODUCTION:**

Odontogenic pain is the main cause of the patient's search for traditional endodontic treatment. Endodontic treatment or endodontic treatment is a common procedure in dentistry. Pain and discomfort are usually associated with root canal treatment. When the treatment itself initiates pain onset and / or swelling, the result can be very sad for both the patient and the operator. The general population generally treats the root canal as a painful and unpleasant experience. In general, root canal treatment relieves pain symptoms; however, the pain may persist after a few days of treatment. Post-operative root canal treatment has been reported to range from about 3% to more than 50% to 3.4% post-oppression pain. Some authors concluded in their study that there was no difference in postoperative pain between patients treated on a visit and patients treated on two appointments. The majority of patients in both groups reported no pain or only minimal pain in 24 to 48 hours of treatment. Some researchers had a higher incidence of postobturation pain after a single visit of root canal treatment. Oginni and udoe have been reported to have a high rate of pain and post-sealing shoots after single visit procedures, this study also reported that the vital pulps were less frequent post-pain sealing (48.8%) while the teeth having no vital pulp paste after high-frequency sealing (50.3%) 10. Other studies have found that after two visits to root canal treatment has had more proportion than pain postobturation. Some preoperative and operative factors are associated with pain after endodontic treatment. Patients with severe pre-pain have a higher incidence of endodontic post-severe pain than those without conventional

endodontic treatment prior to pain. The frequency of postobturation pain is also significantly affected by the dental condition of the tooth and the type of attribution, sex number, tooth type, size of the bacteriological condition of the periapical lesion, the position of the tooth and the type of material showed no effect on closure pain after filling. But the operator can cause pain from the mud instruments, waste paper points, fillers or chemical postobturation, hitting the top of the periapical tissues of the pain root. Perioperative pain was significantly associated with obturation technique used during root canal treatment. The aim of this study was to determine the severity of pain and postobturation pain with VAS (visual analog scale) and to evaluate the relationship between pre-sealing and post-sealing when making the root canal of pain compared to a single visit treated at two visits.

**MATERIALS AND METHODS:**

This Quasi Experimental study was held in the Operative Dentistry Department, Mayo Hospital, Lahore for six months duration from July 2017 to December 2017. Patients requiring endodontic treatment were included in the study. Verbal informed consent was obtained from the patients. History, clinical examination and radiographic examination were performed. Patients in need of a single visit were included in Group 1 (N = 30) and patients were treated twice in group 2 (N = 30). For each treatment tooth, the presence of the pulp's vitality, including the presence of data, preoperative, pain and pain postobturation 6 degree of presence or absence recorded using 12 and 24 hour visual analog scale (VAS) respectively.

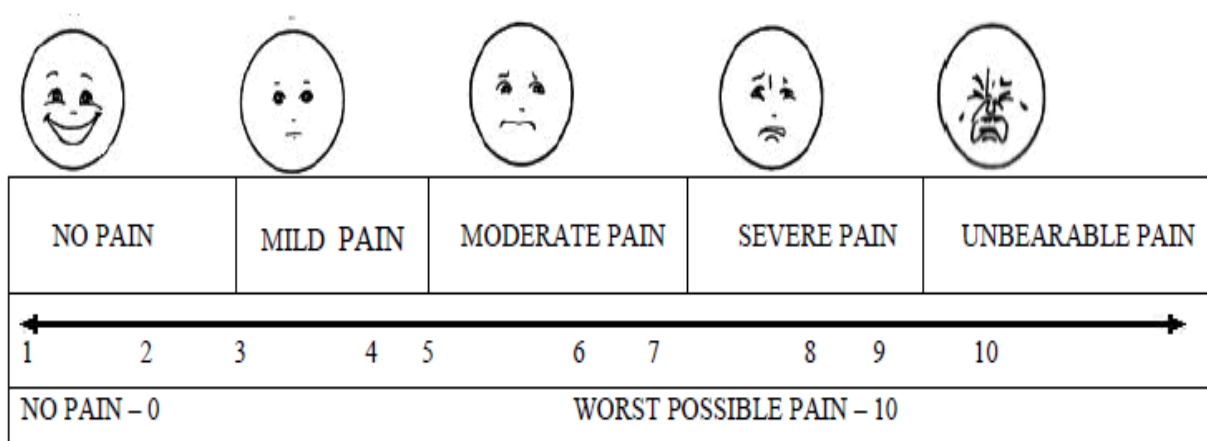


Figure 1. Visual Analogue Scale

The patient was given the VAS form along with the seal and a sealed envelope to return the form 24 hours later. Patients were contacted by phone again at 4:00, 24 hours later, to remind those who completed the VAS form. At the first appointment, standard procedure for both groups included local anesthesia, rubber dam insulation, caries digestion and standard introduction preparation. The length of the study was determined radiographically by a coronal reference 1 mm below the apex of the radiographic. The root canals were cleaned and the reverse technique, files and drills were combined using Gates Glidden (Dentsply / Maillefer, Ballaigues, Switzerland). Teeth

#### Pre- and Postoperative Pain:

\_\_\_\_\_ day 0 \_\_\_\_\_ 7 days \_\_\_\_\_ 3 months \_\_\_\_\_ 6 months \_\_\_\_\_ 12 months

0 = No problem  
1-3 = Mild problem  
4-6 = Moderate problem  
7-9 = Severe problem

	None	Mild	Moderate	Severe
Pre- and post-treatment pain	0	1-2-3	4-5-6	7-8-9

#### Patient Satisfaction after Treatments:

\_\_\_\_\_ 7 days \_\_\_\_\_ 3 months \_\_\_\_\_ 6 months \_\_\_\_\_ 12 months

0 = Unsatisfied  
1-3 = Mildly satisfied  
4-6 = Moderately satisfied  
7-9 = Very satisfied

Degree of overall satisfaction	Unsatisfied	Mildly satisfied	Moderately satisfied	Very satisfied
Pre- and post-treatment pain	0	1-2-3	4-5-6	7-8-9

After one week, the teeth were closed as in group 1. Data were analyzed with SPSS version-17.0. Repeated measures of variance analysis (ANOVA), Pearson correlation (r) and chi-square test were performed between the two groups. Statistical significance was taken as  $p < 0.05$ .

#### RESULTS:

Of the 60 patients who underwent root canal treatment, 32 (53.3%) were male and 28 (46.7%) were female (M: F = 1.1: 1). The mean age of the patients in the single visit group was  $31.9 \pm 12.4$  years and it was  $30.5 \pm 8.7$  in the two groups ( $p = 0.591$ ). Of the 30 patients who visited the single root canal, 19 (63%) were vital and 11 (37%) had necrotic dental status, 30 had two-channel canal visit, 22 (73.3%) were vital and 8 (26.7%) were necrotic. There was a necrotic tooth ( $p = 0.405$ ). Pain is the most common presentation pattern for visits to the root canal and 56.7% and 70% respectively, followed by 26.7% and 10% food sensitivity, 10% sensitivity 10%, and 6.7% prosthesis and 10% ( $p = 0.408$ ). The mean preoperative pain score (VAS) was  $2.03 \pm 1.27$  in patients undergoing a single visit of the root canal. In

were randomized into two groups, as follows: Group 1, treated only with paper points, each channel is filled with spots, and then the root canals of the root canals Sealapex (Sybron Endo, CA with percussion-proof US) using the lateral condensation technique. Group 2, treatment of multiple visits, teeth prepared as in group 1, but not blocked. Chemomechanical preparation was completed with the same technique for all cases in the first case. a sterile cotton pellet pulp was placed in the chamber and the access gap was closed with Provisional Restoration (Favodent, Karlsruhe, Germany).

two visits, the root canal was  $1.97 \pm 1.09$  ( $p = .829$ ). After 6 hours postoperatively, the mean EVA values of the single root canal were  $1.97 \pm 1.12$  and  $1.20 \pm 0.71$ , respectively. Slimming after 6 hours in the pain score was found to be statistically significant in both the individual visits and the channel ( $p = 0.003$ ). After 12 hours postoperatively, the mean VAS in the visit group of the single channel was  $1.40 \pm 1.07$  and  $1.03 \pm 0.66$  at the two-channel canal entrance. The slimming of the pain score after 12 hours was not statistically significant in the individual visits group and in the two channels ( $p = 0.117$ ). After 24 hours postoperatively, the mean VAS value of the single root canal was  $1.0 \pm 0.98$  and  $0.60 \pm 0.77$ , respectively, in the visit of two root canals ( $p = 0.085$ ).

**Table :1**  
**Comparison of Pre and Post Operative Pain between Visit 1 and 2**

	Number of Visit	Mean	SD	p-value
Pre Operative Pain	1	2.03	1.27	0.829
	2	1.97	1.1	
Post Operative Pain 6 Hourly	1	1.97	1.13	<b>0.003</b>
	2	1.20	0.71	
Post Operative Pain 12 Hourly	1	1.40	1.07	0.117
	2	1.03	0.67	
Post Operative Pain 24 Hourly	1	1.00	0.98	0.085
	2	0.60	0.77	

Postoperative pain was not statistically significant in both groups at 12 and 24 hours. however, the mean VAS of the two visits to the root canal was less than the individual visit group to the root canal after 12 and 24 hours. Correlation positive  $r = 0.222$  was not statistically significant in one visit group of the root canal ( $p = 0.239$ ). In two visits to the root canal group, the correlation was strongly positive, ie  $r = 0.803$  and also significant ( $p = 0.001$ ).

#### DISCUSSION:

The effectiveness of endodontic treatment between the researcher and the physician after the appointment is still ongoing according to multiple appointments in terms of pain after closure. An advantage for a visit or two, after visiting the root canal treatment for better results in two snapshot pain release, although the root canal was found to be associated with 6 hours of pain sealing after the visit, but after 12 and 24 hours. According to Figini L et al., Patients undergoing a single visit may experience a slightly higher incidence of pain after closure and are more likely to receive analgesics. Jalil Modaresi et al. In two visits, they found a low incidence of post-occlusive pain in single-visit endodontic treatment compared to endodontic treatment. This was supported by Albashaireh ZS et al. They were also seen to be significantly higher in group visits to the group of unique work pain postobturation in the shutter 24 hours. Previous studies have shown a strong positive relationship between preoperative and postoperative pain. Oginni and udoeye both procedures in the study room found that multiple visits were statistically significant as well as significant relationships between preoperative pain and post sealing. This study also had a statistically significant correlation between preoperative pain and

post sealing, supporting both this single and multiple visits.

#### CONCLUSION:

Although there was no advantage in comparing the root canal treatment of a canal in the first 6 hours and comparing the closing pain after two sessions, root canal treatment of the two visits gave better results in terms of postoperative pain. Congestion after 12 and 24 hours Although this study reported positive results in the treatment of the root canal of two visits to postobturation pain. However, single-visit endodontic treatment has been shown to be a safe and effective alternative to the treatment of two visits, especially in societies where patients fail after the first appointment to relieve pain.

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