

Reasons for not Opting for Crown Following Root Canal Treatment

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ABSTRACT

This study was conducted to know the reasons why people do not opt for crowns after root canal treatment. A well-formed proforma was used to document the ratio of crowned vs. non-crowned individuals and the reason behind each. A total of 151 participants with RCT treated teeth took part in the survey. almost half of them got their RCT treated teeth crowned (51.0%). 49.0% did not get their teeth crowned and 21.2% showed a lack of interest. Other reasons identified were lack of awareness, time limitations and non-availability of facilities. Lack of awareness is a far more common cause that can be minimised by good education and guidance.

Keywords: Crowning, oral hygiene, dental preservation, Root canal treatment.

INTRODUCTION

A man cannot defeat the perfections of nature. Dentistry requires maintaining the tooth to its nearest possible natural conditions. A major objective in dentistry is maintenance of tooth vitality.¹ One such approach to achieve this goal is Root Canal Treatment (RCT) to conserve the damaged tooth by lining the root canal.² RCT is excavation of the necrotic or dead tissue followed by the placement of well condensed filling to intercept the further growth and perforation of microbes with in the root canal.³ The filled root canals can be infected by various means and microbes, invading the area and may cause periradicular disease.⁴

Up till date public is unaware and is ignorant about the most appropriate practices about conservation and maintenance of their oral health.^{2,5} After treatment the tooth becomes weaker as compared to healthy ones which can be countered by adopting different treatment procedures. On the basis of anecdotal evidence, crowning is considered to be the most suitable choice for endodontically treated teeth.^{2,6} Most of the crowned teeth with a functional pulp will remain free from the effects of pulpal deterioration for many years.⁷

Coronal concealment of an endodontically treated teeth can enhance the clinical success of the restored teeth due to which crowning is considered to make a tooth safer from further damage.⁸ RCT is something which has to be done to eliminate the tooth pain arising due to different factors whereas, crowning is somewhat related to preventive approach.

A study conducted in an institution showed that endodontically treated teeth, not crowned, after obturation were lost at six times greater rate than crowned teeth. This study showed strong association between crowning and survival of endodontic treated teeth.⁹

People avoid crowning owing to multiple reasons. For example dental anxiety, which is intensely rooted in peoples' minds.¹⁰ Anxiety may arise due to shortfall of trust, fear of pain and fear of loss of control.^{10,11} People with an increased dental fear avoid dental visiting.^{12,13} Or it may become a reason for postponing dental treatment.^{14,15,16} Other reasons may include lack of time for dental treatment, previous bad experience, financial reasons and lack of knowledge.² This study was conducted to know the reasons why people do not opt for crown after root canal treatment.

MATERIAL AND METHODS

This cross-sectional descriptive study was conducted after taking approval from ethical board of institute at College of Dentistry, Sharif Medical and Dental College, Lahore, Pakistan. Using convenient sampling, individuals who underwent RCT were included in the study, irrespective of the fact whether they underwent crowning or not. Patients with broken or periodontally

compromised teeth were excluded from the study. After obtaining the informed consent, a well designed proforma was given to all these patients. This proforma contain the details like if they got their teeth crowned after RCT and why and if not, then the reason behind.

Recorded data was coded and entered using SPSS ver. 20.0. Numerical data like the age was reported as mean and standard deviation. Nominal data like gender, marital and educational status was recorded as frequency and percentages. Descriptive statistics (Number and percentage of responses for the questions related to the reasons for opting or not opting a crown) were calculated for response items. Chi-square Test was used to test the association between RCT crowned and uncrowned teeth with gender and educational level for which *p* value of 0.05 or less was considered significant.

RESULTS

A total of 151 participants with RCT treated teeth took part in survey with the mean age of 27 ± 9.805 . 61.6% were males and 38.4% were females. Most of them were unmarried (64.9%) and majority were students 58.3% (fig.1).

According to our survey almost half of participants got their RCT treated teeth crowned (51.0%). The most important reason of getting their RCT treated teeth crowned was doctor's recommendation (36.4%). 33.1% and 29.1% stated that doctor informed them about the advantages of crown and convinced them. Few of them got information from a relative (17.2%), internet source (6.6%) and other social medias sources (11.3%). (13.2%) had good previous experience with crown.

Figure 1:

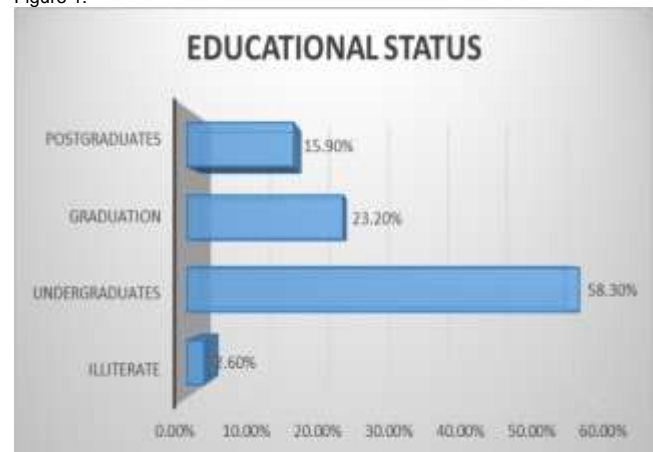
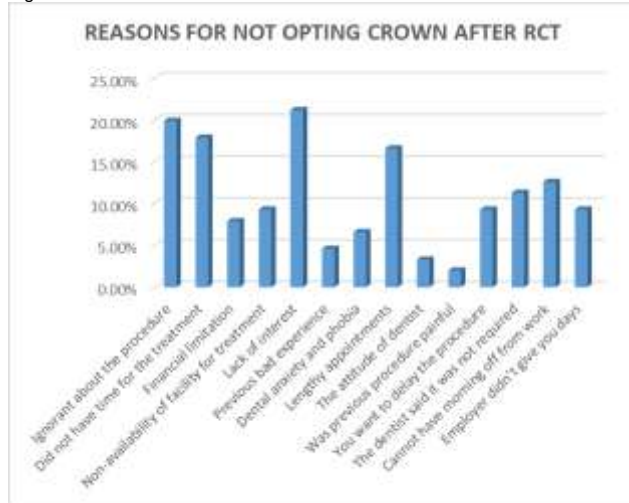


Figure 2:



The rest (49.0%) did not get their teeth crowned as 21.2% showed lack of interest. 19.9% were ignorant about the procedure and 16.6% thought it was a lengthy treatment. 17.9% of studied population did not have time and 9.3% claimed non-availability of facility near them. Others had different limitations for not opting the crown after RCT (fig.2).

Chi-square test was applied to find out the relationship between RCT crowned and uncrowned teeth with gender and educational level but statistically no significant relationship was found.

DISCUSSION

Tooth preservation is better achieved by providing coverage after tooth root canal treatment.¹⁷ However, it is valuable info only if it's importance is recognised by patients. In our local areas, people lack awareness and thus don't follow the oral hygiene protocols.¹⁸ This is partly attributed to lack policy regarding oral hygiene and health at the government level. Compliance with oral hygiene is multifactorial including person's knowledge, availability of services, finances and general behaviour of public. It is generally seen that people show good response towards oral health if they are properly educated.¹⁹

In the present study, we found that 21.2% of people among those who didn't get their tooth crowned had lack of interest. The second common reason found was ignorance about the procedure. Same results were shown by Akram et al in 2018. They found lack of awareness in 29% cases.² Contrary to these results, Locker et al. found large population of their study i.e. 57.4% were unaware of the need of tooth protection by crowning.²⁰ 9.3% of our study subjects didn't have facility in their vicinity. Smith et al. conducted a study in 2014 to find out the reasons behind not undergoing crowning after dental treatment and found non-availability of oral treatment resources as one of major factor besides lack of awareness. They concluded that if there are better resources available, there will be better chances of having knowledge and understanding among people for teeth protection after endodontic treatment.²¹

Financial limitations are present not only in developing countries but also have great impact in developed countries as dental treatments in those countries are also on payment. Study conducted in USA and Canada showed financial restrictions as a major cause of not undergoing crowning.^{21,22} Locker et al. also found same reason in 28% of subjects.²⁰ In contrast, individuals of our study didn't report this as their major concern. This may be attributed to the fact that our health care facility provides free or subsidised treatment. Lack of time was the cause of not

undergoing crowning in 17.9% of our study individuals. Similar results were found by Akram et al reporting same reason in 20% of their cases.² This may be because of busy daily life routine and long appointment times at dental health care facilities. No significant co-relation was found among the crowned and uncrowned teeth with level of education and gender.

Limitation: Further confounding factors that can affect the patients' decision of not getting crown, need to be studied in order to have more robust results.

CONCLUSION

It is found that many patients don't opt crowning after getting endodontic tooth treatment. Reason being multifactorial including lack of awareness, non-availability of resources and time limitations. Lack of awareness is far more common cause that can be minimised by good education and guidance.

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