



Awareness and knowledge of tooth saving procedures in patients visiting the department of conservative dentistry and endodontics MM Dental College Ambala: A questionnaire-based study

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Abstract

Introduction: Conservative and Endodontics is the most common department which is visited by patients for treatment in dental college. Patient's awareness and knowledge of tooth saving procedures like filling and root canal treatment is a very important issue in dental practice. A patient who is well-versed with procedures like filling and endodontic (root canal treatment) significantly influences the course and effects of treatment. Hence the aim of this study was to evaluate the knowledge and awareness of patients regarding tooth saving procedures.

Material and Methods: A total of 100 participants responded including 42 males and 58 females. The study was done with the help of specially prepared questionnaire regarding knowledge and awareness of tooth saving procedures and were distributed to patients visiting the department of Conservative and Endodontics for treatment. The questionnaire comprised of 22 questions related to conservative and root canal treatment like pain of RCT, past experience, role of antibiotics in endodontic infections etc. The analysis of data was performed using methods of descriptive statistics.

Results: The results showed that 63% of the respondents indicated that previous painful experience was the most important concern associated with root canal treatment. 78% of the participants preferred root canal treatment over extraction. 40% preferred specialist for endodontic treatment. 67% of the participants answered that endodontic infections cannot be resolved only with antibiotics without endodontic treatment.

Conclusion: Knowledge and awareness of patients regarding common tooth saving procedures like filling and root canal treatment influence the decision-making and choice of treatment. The results of this study demonstrate the importance of integrating evidence-based practice concepts into teaching curriculum, continuous education courses and postgraduate studies. However, further studies are necessary to evaluate this trend.

Keywords: cost, pain, knowledge, conservative, endodontics, root canal treatment

Introduction

Conservative Dentistry and Endodontics is a branch of dentistry which deals with the treatment of caries, malformed, discolored, non-esthetic or fractured teeth and endodontics deals with treatment of pulpal and periapical diseases and dental pain management. It is a noble profession based on work on other people therefore several factors should be considered during clinical work as it requires prior decision-making. There are several non-clinical factors which influence patient's treatment and outcome. These influences include factors such as socioeconomic status of patient, how patient interacts with community, awareness regarding dental treatment, quality of life and patient's expectation and wishes [1]. Modern contemporary Conservative Dentistry and Endodontics focuses on painless and effective treatment. Many patients admit that they feel stressed about getting dental treatment. Janczarek *et al* in their survey-based research regarding awareness and knowledge of endodontic treatment culminated that majority of the patients are aware of the endodontic treatment, different types and anesthesia, modern techniques and treatment outcome prediction [2]. In survey by Sisodia *et al* moderate knowledge and awareness

about dental treatment in selected sample of dental patients was observed. Need for providing more information to patients was highlighted [3]. Creation of natural dental appearance has become an important task and especially in restorative dentistry its interest have been markedly increased [4]. Knowledge is defined by "Oxford dictionary" as expertise and skills acquired by a person through experience or education. Proper knowledge about Conservative Dentistry and Endodontics directly correlates with the success of treatment outcome [5].

Traditionally, a rural patient enters the dental office with the mindset of extraction of the culprit tooth- a soul solution for relieving pain. But the contemporary Conservative Dentistry and Endodontics offers numerous treatment modalities as a solution to patient's dental problem of this era. Hence this study was undertaken to evaluate the awareness and knowledge of patients regarding common tooth saving procedures like filling and root canal treatment, access their concerns, expectations and choices.

Material and Methods

This survey-based research was conducted in a group of 100 patients visiting the Department of Conservative Dentistry

and Endodontics of Maharishi Markandeshwar College of Dental Sciences and Research (Mullana), Ambala during their regular dental visits. Specially prepared questionnaire regarding the knowledge and awareness of conservative procedures like filling and root canal treatment were distributed to patients. The questionnaire comprised of questions ranging from personal and social details to past experience, their impression and experience regarding root canal treatment and its cost, the criteria for selection of dental persons and office and concern of patients to the endodontic treatment.

Inclusion Criteria- Patients from age group of 15 to 65 years who could understand and read English or Hindi and gave their consent were included in this study.

Exclusion Criteria- Blind, mentally retarded and illiterate patients were excluded from participating in this study.

Statistical Analysis

The data collected was subjected to statistical analysis using methods of descriptive statistics like mean, graph and percentage.

Table 1: Questionnaires and answers

S.No	Questions	Answers	Total
Q1.	Do you know carious tooth can be saved?	a. Yes b. No	68 32
Q2.	Are you aware of tooth saving conservative and endodontic procedures?	a. Restoration(filling) b. RCT c. Esthetic treatment (veneers/ crowns) d. All of the above	71 55 3
Q3.	Do you think that black discoloration in your tooth can be restored with filling?	a. Yes b. No	64 36
Q4.	Have you ever got restoration (filling) done in any tooth?	a. Yes b. No	41 59
Q5.	Have you ever been endodontically treated (RCT)?	a. Yes b. No	33 67
Q6.	How you recall root canal treatment?	a. Bad b. Well c. Good d. Not remember	24 35 27 14
Q7.	From whom you got your treatment done in past?	a. Dental quack b. BDS c. Endodontist d. Dentistry student (P.G/ Intern)	7 53 11 29
Q8.	Was your treatment painful?	a. Yes b. No c. Little pain	47 34 19
Q9.	Can antibiotics alone resolve endodontic infections without the need to visit a dentist?	a. Yes b. No	33 67
Q10.	What is your idea of painless root canal treatment with local anesthesia?	a. Safe b. Unsafe c. Don't know	70 22 8
Q11.	Are you aware of minimum cost of filling and RCT?	a. Yes b. No c. To some extent	53 32 15
Q12.	Is the price ok to the complexity of filling and root canal procedure?	a. Yes b. No	45 55
Q13.	Did previous filling/root canal experience (pain) influence your decision of not getting treatment in future?	a. Yes b. No	63 37
Q14.	Are you aware of different filling materials like composite, GIC, amalgam?	a. Yes b. No	28 72
Q15.	Would you prefer extraction of tooth over root canal treatment?	a. Yes b. No	22 78
Q16.	From whom would you like to get dental treatment done?	a. Student of dentistry b. BDS graduate c. Specialist d. Not important	6 42 40 12
Q17.	What you look while selecting dental office?	a. Free of charge treatment b. Professional staff c. Reasonable price d. Painless treatment e. Quick and easy access	20 38 17 21 4
Q18.	Will you pay more for better facilities?	a. Yes b. No c. Depends	24 59 17
Q19.	Do you worry about x-rays taken during root canal treatment?	a. Yes b. No	67 33
Q20.	Are you concerned about long treatment time / number of appointments?	a. Yes	61

		b. No	39
Q21.	Why you preferred MM Dental College Ambala for root canal treatment?	a. Professional staff	51
		b. Less cost	25
		c. Quick and easy access	24
Q22.	Did this survey help you to know about tooth saving procedures filling and root canal treatment?	a. Yes	48
		b. No	32
		c. To some extent	20

Table 2: Gender-wise distribution of awareness and knowledge among patients

Gender distribution of patients	Awareness and knowledge status	Percentage
Male=42	19	45.23
Female=58	35	60.34

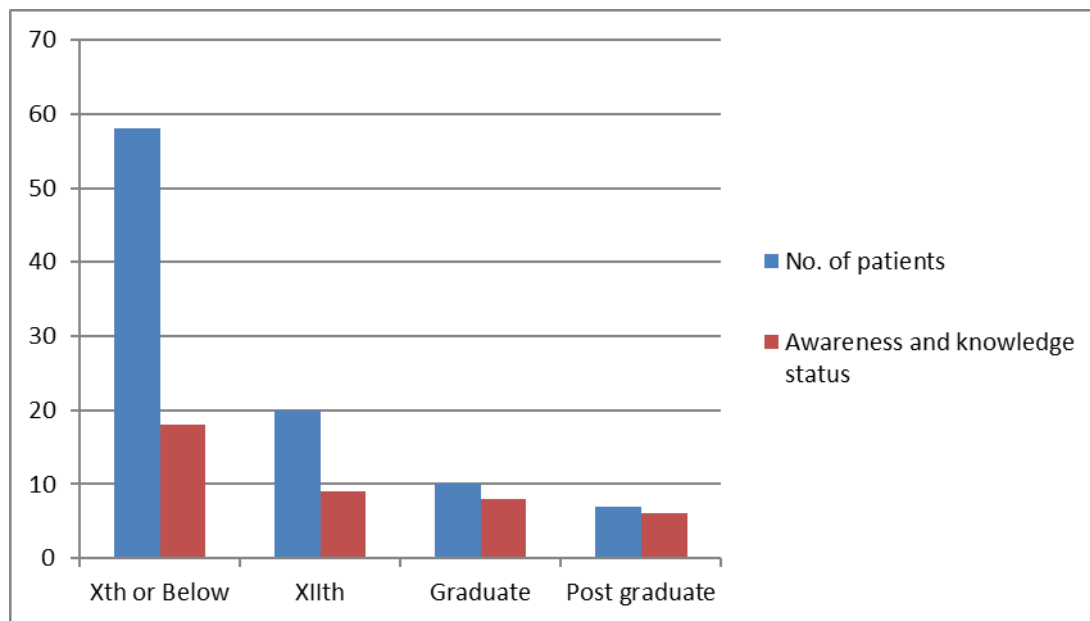


Fig 1: Distribution of awareness and knowledge in patients regarding tooth saving procedures according to education status

Results

Within the limitations of the study, we found that 32% of the patients were not aware of the basic dental treatment procedures. They did not know that carious tooth can be saved. 45% of the people were not aware of root canal treatment procedure. 67% of the people were not treated endodontically. 71% of the people knew about dental fillings and 64% of the people were aware of the fact that blackish discoloration on teeth can be caries and fillings can be used to restore the defective teeth. 67% of the participants answered that endodontic infections cannot be resolved only with antibiotics without endodontic treatment. Among the patients who had undergone root canal treatment 24% reported it bad, 27% reported it positively while 14% did not remember about the experience. 41% and 33% of the people had filling and root canal treatment done in the past. While 59% and 67% of the people had not got filling and root canal done in past. Previous procedures on patients were performed by endodontists in 11%, by BDS doctor in 53%, by dental student in 29% and in 7% it was performed by dental quacks. The patients concern associated endodontic treatment was mostly pain. In terms of pain 47% people reported treatment to be painful while 19% people experienced little pain. 34% people did not experience pain during treatment. Most of the people define their level of knowledge of root canal treatment as average. Patients were also concerned about local anesthesia used during root canal treatment. Vast majority of the patients 70% believed that local anesthesia was safe to use, 22% were apprehensive to

the use of local anesthesia while 8% did not know. 72% of the patients were not aware of different types of materials used for filling the tooth. Regarding cost 45% of the people answered price to be fine relating to complexity of filling and root canal treatment while 55% believed root canal was overpriced. Fifty three percent of the patients admitted that they know the price of endodontic treatment. High cost of treatment was also the patient’s concern about endodontic treatment. 55% of the people admitted that the high price of treatment is an obstacle to the therapy in private clinics. 45% of the respondents admitted that the price of treatment did not influence the decision about not taking endodontic treatment. Females had better awareness and knowledge about dental fillings and root canal treatment compared to men. More than 55% of the respondents had studied till Xth or below. Graduates and postgraduates respondents were few and they had better awareness and knowledge compared to their counterparts. The previous experience about endodontic treatment influenced the decision for undergoing future treatment in 63 percent of cases. 24 percent of the people were willing to pay a high price to make sure the proper treatment. 78% of the respondents strongly selected root canal treatment and only 22% considered extraction as the ultimate method of treatment in case of toothache. The criteria, which patients are guided by when choosing the dentist carrying out root canal treatment- Student of dentistry, BDS, Specialist, Not important. The study shows that most patients still choose specialists (40%). For 12% of the respondents it does not

matter who performs the procedure. The long treatment time was a matter of concern in 61 of the cases and rest were comfortable with the long treatment time. In the last part of the study, the respondents were asked why they preferred Maharishi Markendeshwar Dental College Ambala for root canal treatment (RCT) and did this survey help them know about filling and root canal procedure. More than half of the patients (51%) responded that high quality professional staff was the most important criteria for selecting the place for endodontic treatment. For 25% of respondents the less costly treatment was decisive and for 24% of patients quick and easy access. About half 48% of the respondents said this study helped them to know about tooth saving dental procedures-filling and root canal while 20% benefited to some extent from the survey.

Discussion

Endodontics deals with pulpal tissue of teeth which comprises of nerves and blood vessels. Endodontic therapy also known as endodontic treatment or root canal treatment includes the removal of diseased tissue and protection of the disinfected tooth from future entrenchment by microorganisms [6]. However the level of awareness on root canal treatment among population in the world differ from one state to another due to different technologies available, human resources, human population and many more [7]. Root canal treatment aids in the lengthier duration of retention of teeth having pulpal or peri-apical infections that otherwise might have been extracted [8, 9]. Treatment modality is generally on the diagnosis but there are factors such as patient's opinions and expectations, dentist's judgement and socio-economic factors such as patient's method of payment for treatment expenses which govern the success. Numerous studies support the idea that dental fear can result from previously traumatic or negative dental experience [10, 11, 12, 13]. Pain was the most important concern of patients associated with root canal treatment. This result was in accordance with studies done by Janczarek and Sisodia studies which also stated pain was patient's most important concern.^{2,3} When participants were questioned related to who they preferred for endodontic treatment 40% preferred specialist for root canal treatment. The result was not in accordance to the study done by Bawaji AM *et al* where 57.37% prefer specialist for endodontic treatment. This may be attributed to decrease awareness and knowledge regarding root canal treatment [14]. When participants were questioned regarding resolving of endodontic infection using antibiotics alone, 67% of the participants said it cannot be resolved with antibiotics alone without endodontic treatment. Similar results were seen in study done by Aldaswari M *et al* [15] and Bajawi M *et al* [14] where 89.1% and 73.77% participants answered it cannot be resolved with antibiotics alone without endodontic treatment. In our study we found out that 78% of the participants preferred root canal treatment over extraction. Our finding was contraindicated with the result reported by Sisodia *et al* [3] where most people 38.5% preferred to extract and only 20% opted to do RCT instead of extraction. The result was in accordance with study done by Janczarek M *et al* [2] in Lubin where more than 79% of the respondents strongly preferred root canal treatment and only 21% are considering extraction as the ultimate method. This shows that if patients are properly educated regarding RCT, they get motivated to undertake the treatment. Data showed that

there was a significant correlation between the gender and level of education. Females (60.34%) had higher level of awareness on filling and root canal treatment than male gender (45.23%). This finding was supported by study reported that females were more courage and concerned about their oral hygiene care [16]. The study was also in accordance with study published by Daud MSM *et al* [7] in which female gender (73%) had higher level of awareness on root canal treatment than male gender 53%. Our result also showed people with higher education had higher level of awareness than low level groups. This is because they were more aware on their oral health status and have easy access to dental services. Study done by Will erhausen S *et al* [17] found high education level people took more care on their dental health and more often went to dentist for screening purposes. When questioned about will they pay high cost for getting RCT, most of the respondents answered no. This is because all respondents involved in our study were the patients attending MM dental college, Ambala where most of the root canal treatment is provided by dental students without charge.

The basic principle of modern endodontics is painlessness and effectiveness of the treatment. Properly conducted interview with the patient helps in deciding on the appropriate therapeutic treatment, especially with regard to endodontics, which often prevents tooth loss.

Conclusion

From the findings of the study awareness and knowledge of patients regarding tooth saving procedures- dental fillings and root canal treatment was less. Cost associated with endodontic treatment, professionalism and competence of clinician are crucial factors that affect decision making in endodontics. Pain was the most common concern associated with root canal treatment. There is need to educate the general population regarding restorative and endodontic treatment procedures. There is need to conduct effective health programs at government as well as private sector level. More strategies are required to educate people on getting RCT when indicated.

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