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Knowledge, Attitude and Beliefs on Single Visit vs Multi-Visit Endodontics of Dental Practitioners

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ABSTRACT

Introduction: Along with innovations in techniques, instruments and materials, the root canal treatment has become more predictable and result oriented in endodontics, however, it almost depends on the knowledge, attitude and skills of the dentists too.

Objective: To investigate the knowledge, attitude and beliefs of the dental practitioners on single vs. multiple visit endodontics in western Maharashtra.

Methods: A well standard questionnaire was framed and distributed among 150 dentists practising in and around Karad city, Maharashtra (including general dental practitioners and specialists working in the private sector). The data were analyzed by the no of responses as a percentage of total responses to get the understanding of the majority opinions of participants.

Results: Among the dentists many of them (64 %) prefer multiple visits, many of them consider a single visit is a speciality job (73%). One-third of them use the old technique of Working length determination, Biomechanical preparation, Obturation and radiograph method (45.3 %). Few, mostly younger generation (45 %) they adopted recent innovations and types of equipment and techniques with reduced time to do Root canal treatment and believe the success of single visit endodontics is more and predictable compared to multi-visit.

Conclusion: The younger generation is keen on adopting the new techniques and materials and equipment to perform root canal treatment, preferring single visit over multiple visits. This survey also showed, continuing educations and hands-on courses play an important key role in motivating and adopting such practices among general dental practitioners.

Key Words: Endodontics, Dental practitioners, Knowledge, Attitude, Beliefs, Root canal treatment

INTRODUCTION

Endodontics is one of the fastest-growing disciplines in the dentistry. Along with innovations in techniques, instruments and materials, the RCT has become more predictable and result oriented. But, it almost depends on the knowledge, attitude and skills of the dentists too. Root canal treatment is technically demanding, and it fails when treatment falls short of acceptable standards. To provide patients with the most recent and predictable treatment planning, patients must be well informed about the outcome of endodontic treatment. It is important to acknowledge that outcome of root canal treatment is dependent not only on specific factors like root ca-

nal infection, the complexity of root canal morphology, but is also very much influenced by less specific, more distinct causes such as dentist's skills and attitudes.^{1,2}

Studies have shown that most clinicians complete their RCT in multiple visits, hoping for less flare ups.³⁻⁵ At the same time, various researchers have been reported to advocate for single visit root canal treatment(RCT)as results are more predictable.⁶⁻⁹ Various studies have been done on postoperative pain analysis among single or multiple visit endodontics but none of the surveys is done in India to test the single vs. multiple visit endodontics among the dental practitioners. So, the primary purpose of this survey was to know the

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attitude, knowledge and beliefs of dentists among western Maharashtra population regarding single vs multiple visit endodontics.

MATERIALS AND METHODS

Among 150 dentists includes both general dental practitioners and specialists, the survey was conducted using a questionnaire. The questionnaire was written in English, was used which involved no of visits for the root canal, preparation, technique, working length measurement, irrigation technique, radiography technique, isolation technique, obturation technique, any methods to upgrade the knowledge. Around 26 questions prepared including above-related matter and answers were recorded, the percentage was calculated depending on the number of participants and answers. The percentage was shown in table.

The data were analyzed by the no of responses as a percentage of total responses to get the understanding of the majority opinions of participants.

RESULTS

Out of the total, 150 participants majority were males (74.66%), wherein, most of them (78%) were under the age of 45 years, rest (40%) were under the age of forty. A large number of dentists were seen in the younger aged group. as well as more clinically experienced group (66.67%). Most of the participants (90.6%) were general practitioner. About 34.6% of the participants read scientific journals monthly, with 18.66% doing so every week.

DISCUSSION

Most of the participants (64%) have preferred multiple visit practice. Hence, more (53.33%) failure rate according to participants is single visit endodontic. They (57.33%) felt that post-operative pain is more with single visit endodontic. About 73.33% of participants felt that single visit endodontic is the job of a specialist. Most of the participants (61.33%) used IOPA techniques of the image taken. One-third of participants used suction isolation method, while 40% used rubber dam method and remaining 26.66% asked the patients to spit every time.

One-third of participants used radiographs method for length determination, while 46.66% used apex locator method and the remaining 20% used tactile method. Most of (80%) are used rotary files techniques of preparing root canal and 73.33% are used sodium hypochlorite irrigating solution. About 60% of participants used the syringe technique for irrigation. 81.33% of participants use zinc oxide eugenol seal-

ers and remaining 16.66% use resin-based sealer. GP obturation material used by 88% and paste material by 12%. About 45.33% are used single cone technique of obturation and others (54.66%) are used multiple cone technique.

About 48% of participants are confident about single visit endodontic. Most of (93.33%) preferred multi-visit endodontic in cases with the calcified canal, also 57.33% preferred patient without apical lesion. Most of the participants (46.66%) have upgraded the recent advances and techniques of the root canal by CDE programs, 28% by undergraduate curriculum and 25.33% by hands-on courses. 46.66% of participants have attended the CDE programs/ training courses for a single visit. Most of (58.66%) participants felt that for flare-up is more with multiple visits. About 82.66% of participants are preferred to refer the patient to the speciality clinic if the case is complicated.

As there is a growing and interesting debate between single vs multiple visit endodontics, since decades, we were curious to know the results. All the participants actively participated and gave of positive response for the questioner, the topic was also one of its kind and interesting and informative and relevant. Studies have shown that most clinicians completed their RCT in multiple visits, this is in consistence with our study.^{9,11} General practitioners thought that multi-visit causes fewer flare-ups. But at the same time because of growing technology and techniques from last few decades more than 70% clinicians, researches have been reported to advocate the single visit RCT, as there is no difference in the outcome between the single and multiple visit.^{10,11}

Most of the published studies shown post-operative pain and postoperative flare-ups rates being measures used for the evaluation of success or failure of RCT. most of the studies concluded there is no statistical significance between the single and multi-visit. Some studies have shown that Multi-visit post-operative pain is more compared to single visit.^{12,13} Postoperative pain associated with a 1-appointment root canal is generally the same as postoperative pain associated with multiple-visit treatment.¹⁴ Some studies have shown that Multi-visit postoperative pain is more compared to single visit.¹⁵ Some studies have shown that multi-visit root canal treatment protocols were more effective in reducing endotoxins than single visit root canal treatment protocols.^{16,17}

Studies have shown that single visit endodontics is better than multiple visits in comfort to patient in terms of injections, anxiety, frequent calls in terms of no of frequent dressing, no contamination, no injection. Studies have shown single visit RCT can be varied to be a viable option for patients, irrespective of age, sex and preoperative symptoms, vital or non-vital tooth, apical lesions. (pain, tenderness on percussion and periapical- radiolucency).¹² Multiple visit RCT involves repetition of several stages at each visit like LA administration isolation with a rubber dam, access prepara-

tion, removal of more dentine by biomechanical preparation. Single-visit not only reduces time but also cost-effective and improve patient compliance and practice management. Only some cases where severe curvature, calcification, broken instrument, perforation, and patient with psychosomatic disorders we have to go for multiple visits. Otherwise, there is no significant difference between single and multi-visit outcomes. With the advent and innovations in technology from start like access, radio-graph, working length measurement with apex locators irrigation with endo-activator with irrigating solutions like warm sodium hypochlorite with improved technique in BMP using various rotary instruments and obturation with corresponding filling material, the endodontics is made easy and time saving.¹⁸

A minimum degree of expertise and continuing education must be promoted in graduates after their time of dental education if ethical and quality clinic practices are to be strengthened. But at the same time awareness about the same is very much essential through continued education and hands-on courses and the conferences.

CONCLUSION

In the last decade, the dental practice has implemented numerous new ideas, procedures and tools. The plurality of survey questions was focused on traditional diagnosis, planning and securing approaches, reflecting a range of modern equipment and technologies. The research demonstrates the value of developing higher-quality preparation or dental preparation for clinicians. Lenses including surgical microscopy were seldom utilised during the training of dental procedures, for updating the knowledge of dental practitioners.

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