

## Arab Dentists' Attitude to Single and Multiple Visit Root Canal Treatment (Survey Based Research)

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**Abstract:** Multiple visit root canal treatment was an established protocol in endodontics, but it has many disadvantages like inter appointment micro leakage and flare ups or loss of temporary seal, long time spending in root canal treatment leading to patient tiredness, operator fatigue, inability to do esthetic restorations in time in case of traumatically damaged crowns and discontinued treatment leading to failures. Single visit root canal treatment has been the debate within the dental community.

**Objectives:** The aim of this study was to investigate the Arab dentists points of view related to single and multiple visit root canal treatment, identifying the basis on which the choice is made and how the information necessary for the choice is acquired.

**Materials and methods:** A six questions questionnaire was sent to the Arab dentists through Emails, Facebook accounts, and phone messages. The following topics were addressed: current clinical procedures, treatment rationales and preferences. 325 Arab dentists responded to this questionnaire.

**Results:** Single visit endodontic treatment is carried out in 40% of vital pulp cases, 20% of the cases of necrotic pulp without lesions and only 9 % of the cases of necrotic pulp without lesions. The presence of vital pulp (52%) and the absence of exudation (46%) are the most important criteria for carrying out single visit endodontic treatment.

**Conclusion:** The Arab dentists prefer multiple visits over single visit root canal treatment in pulp necrosis cases. When pulp vitality is not compromised there is an increase in the number of Arab dentists who choose single visit root canal treatment.

**Keywords:** Single visit, multiple visits, pain, exudate, lesion, flare up

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### I. Introduction

Since its introduction to endodontics world, single visit root canal treatment has been a form of controversy (1,2). Some dentists advocate that all cases of root canal treatments to be done in one visit while others do not consider it even in cases of vital pulp extirpation(3). Studies reported insignificant statistical difference between single and multiple visit endodontics in terms of survival, post-operative pain or flare-ups(4). Introducing magnifying loupes, operating microscopes, nickel titanium rotary files systems, ultrasonic devices, newer obturation systems, single visit root canal treatment is now considered as an acceptable alternative treatment procedure for endodontic problems(5). Single visit treatment has many advantages for patients like Prosthetic work can begin without delay, the risk of cancelled appointments is reduced, and medico legal risk is reduced. Also it has advantages for dentists like that Patient remembers a single healing procedure rather than multiple episode of pain and discomfort associated with the Clinician, Materials needed for separate visits are saved, and limitation of schedule interruption to replace lost or broken temporary restorations. Thus, it is still a controversial among general practitioner as well as the specialists as to when and how to decide single visit or multiple visits root canal treatments (6).

### II. Materials And Methods

A standardized questionnaire distributed to Arab active dentists through internet and Arab dental social media which include thousands of Arab dentists from different nationalities. The questionnaire comprised 6 multiple-choice questions and the participants were requested to answer these questions which contain number

of root canal treatment visits in different cases and factors affecting dentist' decision about single or multiple visits treatment. The answers of 325 participants were recorded and entered into spread sheet software for analysis. Descriptive statistics were used.

### III. Results

Single visit root canal treatment is usually performed by almost (40%) of all participants in this survey, in cases of vital pulp, but when the biological status of the pulp becomes necrotic very few still choose this treatment type (Table 1).

**Table 1: Number of sessions until root canal obturation**

Status of the pulp/Number of sessions	1(%)	2(%)	3 or more (%)
Vital	129(40%)	119(37%)	77(24%)
Necrotic with lesion	30(9%)	84(26%)	211(65%)
Necrotic without lesion	65(20%)	135(42%)	125(38%)

(20%) of participants chose to provide single visit treatment in cases of necrotic pulp without periapical lesion, and (9%) chose to provide single visit treatment in cases of necrotic pulp with periapical lesion. When questioned about the most common reasons for not performing a single visit root canal treatment in teeth with pulp necrosis with or without periapical lesion, 25% of the participants answered the "importance of the intracanal medication". When asked about the main reason to perform a single visit treatment, 52% of the participants answered that vital pulp is the most important aspect (Table 2).

**Table 2 : Reasons to perform and to not perform single visit treatments**

Reasons to perform single visit treatments	n (%)	Reasons to not perform single visit treatments	n (%)
Vital pulp	170(52%)	Intracanal medication	82(25%)
Inter-appointment contamination	59(19%)	Post-operative pain	101(31%)
Absence of lesion	49(15%)	Doubts about biological healing	67(21%)
Patient preference	47(14%)	Flare-up	75(23%)

The most important sign to enable single visit treatment was the absence of exudate for 46% of them. Other reasons are shown in (Table 3).

**Table 3: Most important signs to enable single visit treatments**

Most important signs to enable single visit treatments	n (%)
Absence of exudate	150(46%)
Absence of pain	78(24%)
Absence of edema	57(18%)
Time	111(34%)
Absence of sinus track	47(14%)
	73(22%)

### IV. Discussion

The results of this study revealed that reasonable percentage of Arab dentists prefer to do a single visit treatment in cases of vital pulp, this result is not similar to the results of Amy Wai-Yee Wong et al study 2015(7) and other studies like Monica de Souza Netto et al study in 2014(8), but it is well supported by more recent systematic review that found no detectable difference in the effectiveness of root canal treatment in terms of radiologic success between single and multiple visits(9). The most of Arab dentists prefer to perform multiple visit therapy. This result is similar to previous studies, such as Araujo Filho et al(10). Trope (11) demonstrated that the use of intracanal medication can improve healing when compared to single visit therapy and this support the result of current study. Dry root canal without exudates, was pointed out as the important factor during the decision-making to perform a single visit appointment. These results are similar to those of previous studies (12,13).

### V. Tables

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Absence of edema	57(18%)
Time	111(34%)
Absence of sinus track	47(14%)
Absence of severe pain	73(22%)

## VI. Conclusion

It can be concluded that a good percentage of Arab dentists perform single-visit root canal treatment in cases of vital pulp endodontic therapy, but in cases of necrotic pulp, most of them perform multiple-visit endodontic treatment. The main reason to perform a single-visit endodontic treatment is pulp vitality.

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