

Case Studies on the Root Canalization of Molar Teeth by General Dentists

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Abstract

This study's objective was to assess the level of expertise in root canal therapy held by general dentists practising in private dental clinics. 400 general dentists received questionnaires, which were disseminated. Simple summary statistics were used to examine the completed questions. 252 practitioners in all answered (about 63%). Egyptians (32%) and Syrians (59%) made up the majority of the responses. Ninety-one percent of the respondents said they had treated patients with root canals. Only seven dentists (3%) who performed root canals employed rubber dams to isolate the patient. More than half of the respondents (55%) irrigated treatment canals with saline. The medication for intern appointments that 46% of doctors used was form cresol. 91% of the respondents said they preferred the standardised and step-back preparation procedures. Almost all dental professionals (92%) employed gutta-percha for obturation, and 97% of them used stainless steel hand instruments to prepare root canals. Cold lateral condensation was used by 74% of respondents. Four radiographs were typically acquired as part of the standard root canal procedure. Ninety-three percent of respondents said that they typically needed three or more visits to finish a molar tooth's root canal treatment. Eighty-eight percent of the practitioners favoured delaying the permanent restoration of the teeth for one or two weeks. The findings of this study support the notion that many general dentists do not adhere to good endodontic treatment standards.

Keywords: Radiograph; Root canal treatment; Restoration; Endodontic treatment

Introduction

Endodontic therapy is a crucial component of thorough, high-quality dental care. Studies under controlled conditions have demonstrated that root canal therapy has high success rates of more than 90%. However, the majority of this research included information from university clinics and endodontic specialists. These data could be misleading when used to estimate the approximate 65-75% success rate of endodontic therapy in general practise [1]. This disparity in success rate may be due to a variation in the endodontic treatment's technical excellence. However, there aren't many statistics about how general dentists approach endodontic therapy. According to these studies, the majority of general dentists do not adhere to the established quality standards and academic standards of care defined by the American Association of Endodontics or the European Society of Endodontology.

Despite the fact that modern dentistry was initially brought to Saudi Arabia about 50 years ago, significant advancements did not occur until 1975, when the dental school in Riyadh, the country's capital, was established. Government health institutions and the dental schools they are linked with typically house highly specialised endodontic practises [2]. These government organisations typically adopt and oversee well-respected endodontic educational programmes under the direction of endodontists with the appropriate expertise. Because the Kingdom has a dearth of endodontists, general dentists perform the majority of endodontic therapy in private dental offices. The goal of this study was to assess the level of expertise in root canal therapy for canines held by general dentists practising in private dental clinics throughout the Kingdom of Saudi Arabia.

Materials and methods

400 general dentists working in private dental clinics in five different major cities and different provinces of the Kingdom of Saudi Arabia, namely Riyadh, Jeddah, Mecca, Tabouk, and Dammam, were selected at random and given a questionnaire about the availability of endodontic treatment in their practises between May 12 and June 10, 2008 [3]. The questionnaire had 21 questions with multiple-choice

answers and a covering letter with explanations. Before being made available, the questionnaire was thoroughly piloted and improved for scope and clarity.

Simple summary statistics were used to collect and analyse the completed questions. Only one unambiguous response was taken into account when computing frequencies and percentages; blank or multiple responses were all classified as missing values.

Results

Sixty-two (252) general dental practitioners (63) provided completed questionnaires. Syrians made up the majority of the responders (59%), followed by Egyptians (32%), Saudis (3%), Sudanese (2%), Filipinos (2%), and others (2%), 229 (91%) of whom underwent root canal therapy [4].

Molar dental medicine

Ninety-nine percent of dentists who performed root canal procedures included permanent molar teeth, but only six percent of patients were referred [5]. The cause was a lack of the necessary expertise, resources, and tools to carry out such treatment. 5% of people preferred extraction.

Intracanal cure

The most often used medication was formocresol (46%). The remaining physicians utilised a variety of formulations,

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including calcium hydroxide (19%), iodoform (11%), camphorated monochlorophenol (CMCP) (23%), and 1% said that they did not use intracanal medicine between sessions [6].

Obstruct technique

Gutta-percha points were utilised for obturation by the vast majority (92%) of the practitioners. 6% made use of paste fillers, and 2% of them used silver points. 26% employed a single-cone approach, whereas 74% used cold lateral condensation of gutta-percha [7]. None of the respondents used Thermafil, Resilon, or the vertical condensation approach in their practises.

Discussion

This study was typical of how general dentistry practitioners in the Kingdom of Saudi Arabia approach endodontics due to the response rate's (63%) high threshold. Therefore, it is possible to trust the results of this questionnaire when comparing the endodontic treatment methods utilised in various cities [8]. Compared to other underdeveloped nations, such as Kenya (67%), and other locations with better facilities, such as Illinois (89%), the percentage of general dentists who performed endodontic treatment is relatively high. According to the study's findings, the majority of general dentists in Saudi Arabia (89%) performed molar root canals.

The gold standard of endodontic therapy is rubber dam isolation. According to a survey of general dentists in America, 59% always use rubber dams [9]. Only 5% of dentists who worked primarily for the National Health Service used rubber dam for endodontic treatment, according to Marshall and Page, while 60% of dentists in the UK reported never using rubber dam for any procedure. General dentists may associate the use of rubber dams with time loss, patient suffering, additional expense, frustration, and annoyance [10]. It is unfortunate that the percentage of general dentists in this study who employed rubber dams was so low (3%), while the bulk of them solely used cotton wool rolls for isolation. This may negatively impact the success rate and root canal treatment quality.

Conclusions

The results of this survey demonstrate the significance of establishing higher level credentialing examinations and/or continuing dental education for general dental practitioners to update their knowledge in the field of endodontics due to the small number of endodontic specialists in private practise in Saudi Arabia.

Conflict of Interest

The author has no conflict of interest.

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