

Average time in between appointments for multivisit pulpectomy in patients reported to a university dental hospital

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J. Adv. Pharm. Technol. Res.

ABSTRACT

Complete removal of the infected coronal and radicular pulp tissue along with obturation of the canal space with suitable medication is defined as pulpectomy. The most common indication for pulpectomy is a tooth with irreversible pulpitis which shows symptoms of nocturnal pain and abscess. To determine the average time in appointments for multivisit pulpectomy in patients reported to a university dental hospital. It is planned as a retrospective analysis of the case records of patients who were treated as two visit pulpectomy procedures in a university dental hospital, India. The study concluded that in the majority of the situations the average time in between appointments for multivisit pulpectomy was found to be within 1 week.

Key words: Innovative, multiple visit, pulpectomy, university hospital

INTRODUCTION

Most of the patients who report to dental clinics with infected pulp tissue and irreversible pulpitis are treated by pulpectomy procedures. It can be either a single sitting or multivisit pulpectomy. The treatment depends on the amount of infection and the corporate level of the child. In situations where there is a draining abscess then it is indicated for multivisit procedure.

The infected root canal is prepared biomechanically using a hand or rotary system, followed by copious irrigation with

root canal irrigants.^[1] Once the canal is clear of any microbial remnants, it is dried and packed with resorbable material till the apex. The absence of any signs of reinfection such as pain or mobility indicates successful endodontic therapy.

Multivisit endodontic procedure is commonly preferred compared to a single visit since the time frame helps in adequate healing of the periapical structures and complete elimination of bacterial load.^[2] The treatment stage for multivisit pulpectomy involves access opening and debridement in the initial sitting; the canals are placed with intracanal medicament for a certain period of time.^[2-5] In the follow-up appointment, once all the microbial infections have reduced, the canal is dried, and obturation is completed. Postendodontic restoration with an intact coronal seal is the factor that evaluates the long-term prognosis in pulpectomy procedures.^[6-9] Multivisit pulpectomy with various medications are also reported.^[10,11] Multivisit pulpectomy procedures have better success and less pain perception compared to single visits.

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Submitted: 17-May-2022

Revised: 22-Jun-2022

Accepted: 17-Jul-2022

Published: 30-Nov-2022

Access this article online

Quick Response Code:



Website:

www.japtr.org

DOI:

10.4103/japtr.japtr_391_22

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How to cite this article: Srinisha M, Ramakrishnan M. Average time in between appointments for multivisit pulpectomy in patients reported to a university dental hospital. *J Adv Pharm Technol Res* 2022;13:S181-5.

[12-18] The authors have many impact journals that have been translated into high-quality publications.^[19-38] Hence, to determine the average time in between appointments for multivisit pulpectomy in patients reported to a university dental hospital.

MATERIALS AND METHODS

Study designs and study setting

The retrospective analysis of case records in a private dental hospital. The children who visited in the time from January 2021 to December 2021 were included as a part of the study. (Ethical clearance approval number. SDC/SIHEC/2020/DIASDATA/0711-0320).

Sampling

Case records involving 727 pediatric patients were analyzed, and then, data were extracted. All pediatric patients who underwent multiple visit pulpectomy were included in the study. A simple random sampling methodology was used. Case records with incomplete case details were eliminated from the study.

Data collection

Single examiner who was calibrated and blindly examined all the records. Data obtained were age, gender, a tooth which underwent pulpectomy, and the time interval between the first and second visits. The data collected were entered into Excel format.

RESULTS AND DISCUSSION

Pulpectomy procedures are aimed at reducing a load of infected microorganisms inside the root canal chamber and promoting the healing of the periradicular tissue

takes place. It also eliminates the pain and discomfort for the children. Complete eradication of the infection can be done either in a single or multivisit procedure. Once the canal is cleared of infectious organisms, it is sealed with a resorbable material. Although biomedical preparation results in the elimination of microorganisms, the complete lack of infectious material is not possible in many situations.^[39] In multivisit pulpectomy procedures, the time frame between appointments plays an important role in elimination and healing^[40] and in permanent dentition, some studies indicate that calcium hydroxide dressing does not eliminate bacteria, and in some situations, it can favor increased bacterial load.^[41,42]

The most common age group of patients who underwent multiple visit pulpectomy was found to be 6–10 years (52.54%) [Figure 1]. The most common gender of patients who underwent multiple visit pulpectomy was found to be male (57.77%) [Figure 2]. The most common tooth which underwent multiple visit pulpectomy was found to be tooth number 54 (19.94%) [Figure 3]. The most common time interval between the first and second visit pulpectomy was found to be within 1 week (35.21%) [Figure 4]. According to a few studies, the second visit of multiple visit pulpectomy was done within 3–4 days which is in accordance with our study.^[6-9,43-49]

On the association between the age group and time interval between the first and second visit of multiple visit pulpectomy, it was found that 6–10 years of patients were recalled within 1 week (19.3%) [Figure 5]. On the association between the gender and time interval between the first and second visit of multiple visit pulpectomy, it was found that male patients were recalled at 1 week (20.9%) [Figure 6]. On the association between the tooth which underwent multiple visit pulpectomy and the time interval between the first and

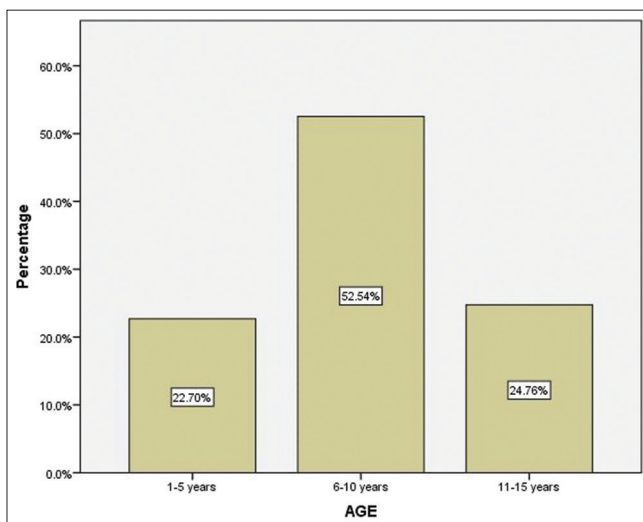


Figure 1: Age distribution of the pediatric patients who underwent multiple visit pulpectomy. The common age group was found to be 6–10 years (52.54%)

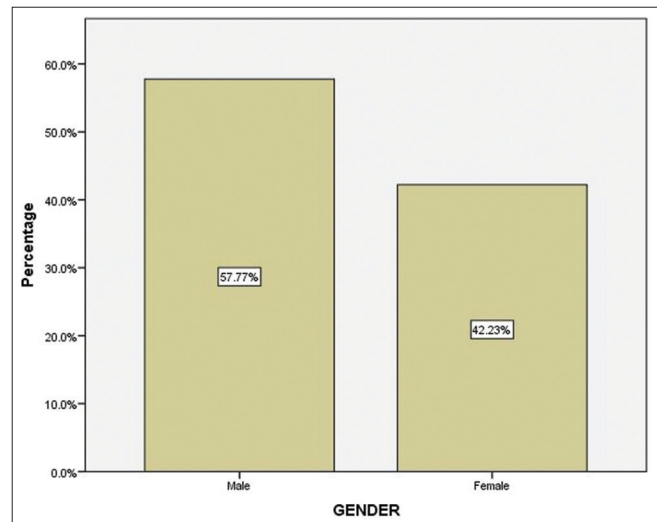


Figure 2: Gender distribution of the pediatric patients who underwent multiple visit pulpectomy. The most common gender was male (57.77%)

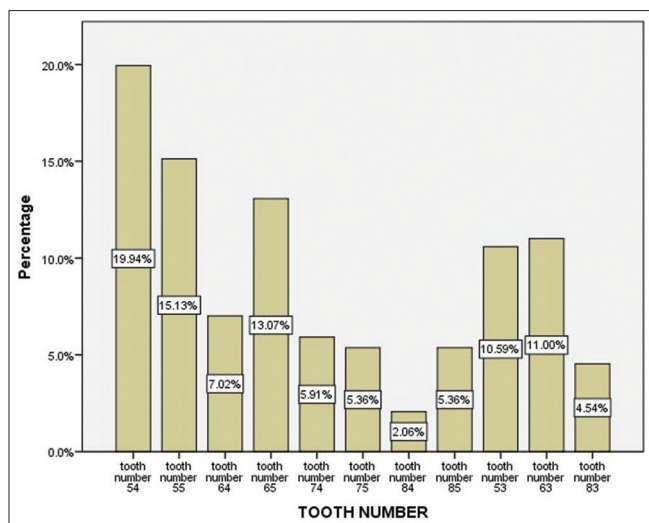


Figure 3: Graph showing tooth which underwent multiple visit pulpectomy. The most common tooth which underwent multiple visit pulpectomy was found to be tooth number 54 (19.94%)

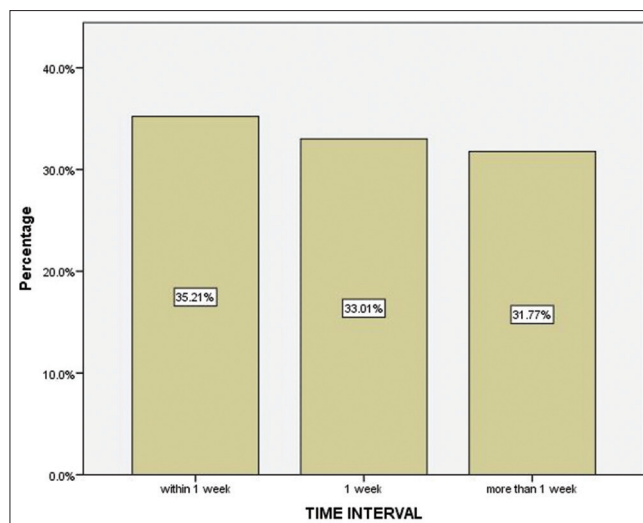


Figure 4: Time interval between the first and second visit of the multiple visit pulpectomy. The most common time interval was found to be within 1 week (35.21%)

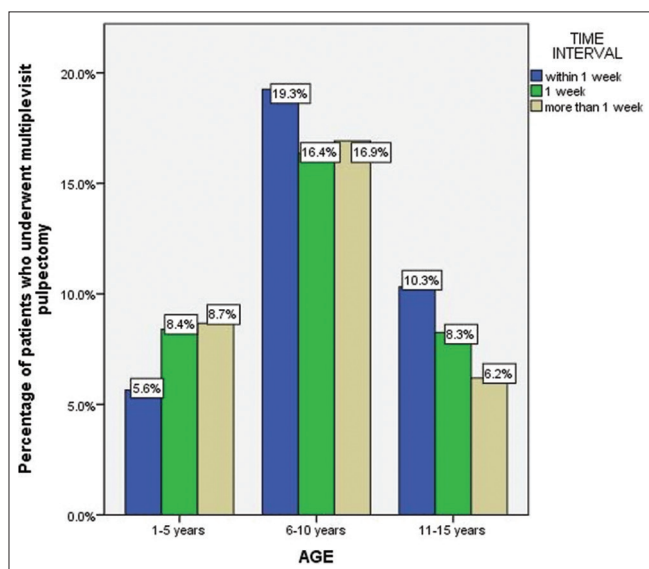


Figure 5: Age of the pediatric patients and time interval between the first and second visit of multiple visit pulpectomy. The blue bar denotes within 1 week, green denotes 1 week, and brown denotes more than 1 week. 6–10 years patients were recalled within 1 week (19.3%)

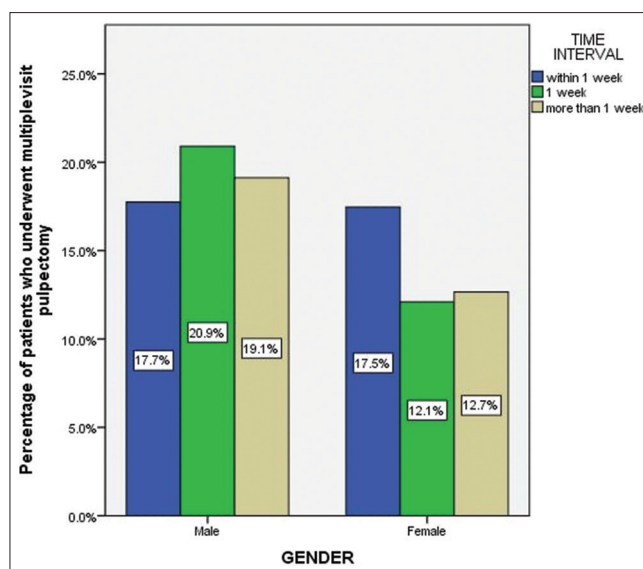


Figure 6: Gender of the pediatric patients and time interval between the first and second visit of multiple visit pulpectomy. The blue bar denotes within 1 week, green denotes 1 week and brown denotes more than 1 week. Male patients were recalled at 1 week (20.9%)

second visit of multiple visit pulpectomy, it was found that tooth number 54 has undergone multiple visit pulpectomy within 1 week (15.8%) [Figure 7].

CONCLUSION

The most common tooth which underwent multiple visit pulpectomy was found to be tooth number 54 (19.94%). The most common time interval between the first and second visit pulpectomy was found to be within 1 week (35.21%). The main significance of multivisit pulpectomy is that it helps in proper healing. Thus, multiple visit pulpectomy done within 1 week was common in university settings.

Acknowledgments

Saveetha Dental College and Hospital, Saveetha Institute of Medical and Technical Science, Saveetha University.

Financial support and sponsorship

The present study was supported by the following agencies

- Saveetha Dental College
- Saveetha Institute of Medical and Technical Sciences, Saveetha University
- Kumaran TV center and furniture, Attur, Salem.

Conflicts of interest

There are no conflicts of interest.

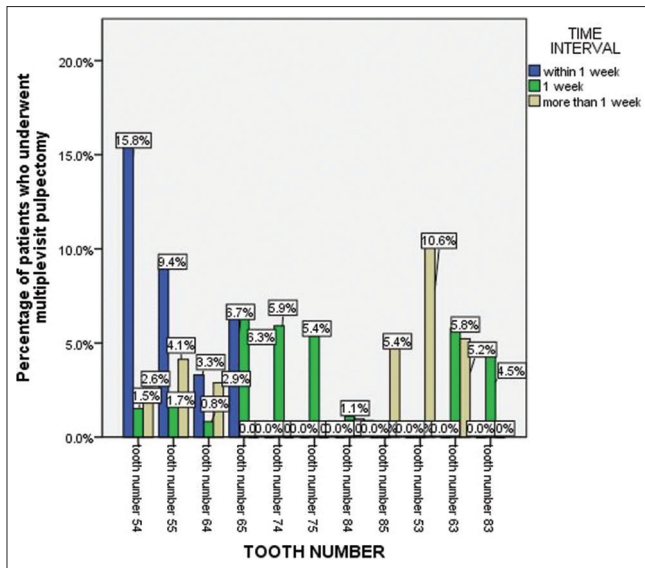


Figure 7: Shows the association between the tooth which underwent multiple visit pulpectomy and the time interval between the first and second visit of a multiple visit pulpectomy. The blue bar denotes within 1 week, green denotes 1 week, and brown denotes more than 1 week. Tooth number 54 has undergone multiple visit pulpectomy within 1 week (15.8%). However, there was a significant difference between the tooth which underwent multiple visit pulpectomy and the time interval between the first and second visit of multiple visit pulpectomy

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