

Retrospective Assessment of Various Endodontic Emergencies Held in Department

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ABSTRACT

Background: Endodontic emergencies are circumstances associated primarily with pain and swelling that require immediate diagnosis and treatment. This retrospective study was conducted to assess various endodontic emergencies help in the department.

Material and methods: This is retrospective study conducted to assess various endodontic emergencies held in the department. Data were gathered on 200 patients. All of the teeth were treated by the same operator. Each patient's record consisted of the following data: age, gender, pulpal and periradicular emergencies. List of endodontic emergency conditions were 12. Data were collected and statistical analysis was obtained. Descriptive and correlation analyses were generated using IBM SPSS Statistics 21. (Armonk, NY, United States).

Results: In the present total patients included were 200. Endodontic emergencies occur more in males (59%) in the study. Endodontic emergencies occur 24% in the age group 18-30 years, 37% in the age group 31-40 years, 18% in the age group 41-50 years, 21% in the age group 51-60 years. Maximum emergency cases were of Necrotic pulp with fluctuant swelling and no drainage obtained through canal (25%) and minimum cases were of pain in the failure of RCT.

Conclusion: This study concluded that endodontic emergencies occur more in males and in the age group of 31-40 years. Maximum emergency cases were of Necrotic pulp with fluctuant swelling and no drainage obtained through canal and minimum cases were of pain in the failure of RCT.

Keywords: Endodontic emergencies, Necrotic pulp, swelling, drainage.

INTRODUCTION

The orofacial pain can be one of the worst human experiences, many times unbearable, leading the individual to experience physical and mental illness, so that orofacial pain is considered as a serious public health problem in many countries.¹ Tooth pain is the main complaint of individuals who

search for emergency dental care and involves many situations, such as: tooth-bone fractures, tooth fracture with pulp exposure, acute tooth pain (pulpitis), apical abscesses, dilaceration in oral mucosa, and hemorrhages.¹⁻⁴ Endodontic emergencies define as pain and/or swelling caused

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by infection or inflammation to the pulpal or periapical area.⁵ They are about one-third of the total dental emergency cases. These emergencies can occur before, during, or even after the initiation or completion of the root canal therapy. Treatment of those emergencies is one of the most challenging aspects of clinical dentistry.⁶ It requires eliminating the patient's signs/symptoms and postponing the permanent treatment.^{7,8} An estimated two thirds of all dental emergencies are endodontic in nature^{9,10}, with patients primarily seeking emergency care for a painful tooth^{9,10,11}. In addition, according to Nationwide Emergency Department Sample, approximately 302,507 patients make hospital emergency room visits each year for mouth abscess/facial cellulitis in the United States.¹² The systemic antibiotic has been received considerable attention for relieving infection related to endodontic emergencies.¹³ Various strategies are chosen to opposite these conditions including pulpotomy, pulpectomy with intracanal medicament, and prescription of systematic medications.¹⁴ This retrospective study was conducted to assess various endodontic emergencies help in the department.

MATERIAL AND METHODS

This is retrospective study conducted to assess various endodontic emergencies held in the department. Before the commencement of the study ethical approval was taken from the Ethical Table 1: Endodontic emergencies according to gender.

Gender	N(%)
Male	118(59%)
Female	82(41%)
Total	200(100%)

Table 2: Endodontic emergencies according to Age.

Age group(yrs)	N(%)
18-30	48(24%)
31-40	74(37%)
41-50	36(18%)
51-60	42(21%)
Total	200(100%)

Committee of the institute. Participants aged 18 years and above were included in the study. Participants who declined to participate and immunocompromised participants were excluded from the study. Data were gathered on 200 patients. All of the teeth were treated by the same operator. Each patient's record consisted of the following data: age, gender, pulpal and periradicular emergencies. All the pre-, intra-, and post-operative information pertaining to each treated tooth, including clinical and radiographic data, was recorded. List of endodontic emergency conditions were 12. Root canal treatment was provided to patients under controlled and standardized conditions. Data were collected and statistical analysis was obtained. Descriptive and correlation analyses were generated using IBM SPSS Statistics 21. (Armonk, NY, United States).

RESULTS

In the present total patients included were 200. Endodontic emergencies occur more in males (59%) in the study. Endodontic emergencies occur 24% in the age group 18-30 years, 37% in the age group 31-40 years, 18% in the age group 41-50 years, 21% in the age group 51-60 years. Maximum emergency cases were of Necrotic pulp with fluctuant swelling and no drainage obtained through canal (25%) and minimum cases were of pain in the failure of RCT(1.5%).

Table 3: Type of Endodontic emergencies.

Endodontic emergencies	N(%)
Symptomatic irreversible pulpitis-normal apical tissue	15(7.5%)
Symptomatic irreversible pulpitis-symptomatic apical periodontitis	22(11%)
Necrotic pulp with symptomatic apical periodontitis; no swelling	34(17%)
Necrotic pulp with fluctuant swelling and drainage obtained through canal	21(10.5%)
Necrotic pulp with fluctuant swelling and no drainage obtained through canal	50(25%)
Necrotic pulp with diffuse swelling and drainage obtained through canal	17(8.5%)
Necrotic pulp with diffuse swelling and no drainage obtained through canal	13(6.5%)
Severe interappointment pain	8(4%)
Severe interappointment pain and swelling	7(3.5%)
Severe pain after completion of RCT	5(2.5%)
Severe pain and swelling after completion of RCT	5(2.5%)
Pain in the failure of RCT	3(1.5%)
Total	200(100%)

DISCUSSION

Endodontic emergencies account for one-third of dental emergency cases and its management poses one of the most challenging aspects of clinical dentistry.¹⁵ Managing the emergency condition when there is pulpal necrosis with fluctuant swelling may involve drainage through the canal, complete canal instrumentation, incisions and drainage, placement of intracanal medicament, and prescribing analgesics according to the standard protocols.¹⁶

In the present total patients included were 200. Endodontic emergencies occur more in males (59%) in the study. Endodontic emergencies occur 24% in the age group 18-30 years, 37% in the age group 31-40 years, 18% in the age group 41-50 years, 21% in the age group 51-60 years. Maximum emergency cases were of Necrotic pulp with fluctuant swelling and no drainage obtained through canal (25%) and minimum cases were of pain in the failure of RCT (1.5%).

Iqbal et al.¹⁷, de Olivera Alves¹⁸, and Tanalp et al.¹⁹ indicated cases with a periapical lesion had a higher risk of developing pain and flare-ups compared to those with no periapical involvement. A study from

Wuhan, China, which analyzed the characteristics of endodontic emergencies during the coronavirus disease outbreak. There were a higher percentage of female patients (86%) who reported with painful emergencies than male patients (14%).²⁰

It is important to note that antibiotic prescription was a very common treatment plan for inter-appointment pain or at the completion of RCT, and was suggested by 47% of dentists and more than 78% of endodontists.^{8,16}

CONCLUSION

This study concluded that endodontic emergencies occur more in males and in the age group of 31-40 years. Maximum emergency cases were of Necrotic pulp with fluctuant swelling and no drainage obtained through canal and minimum cases were of pain in the failure of RCT.

CONFLICTS OF INTEREST

The authors declare they have no potential conflict of interests regarding this article.

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