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Research Article

ENDODONTIC MANAGEMENT HOT TOOTH IN CLINICAL PRACTICE -A QUESTIONAIRRE SURVEY

Thanish Ahamed S and Jayalakshmi

Department of Conservative Endodontics, Saveetha Dental College.

A R T I C L E   I N F O

A B S T R A C T

Aim: To know the Knowledge, Attitude and Practices regarding the management of HOT TOOTH by clinicians and PG students.

Background: The term "hot" tooth generally refers to a pulp that has been diag- nosed with irreversible pulpitis, with spontaneous, moderate-to-severe pain. The main challenge in the management of hot tooth is that it can't be easily anaesthetised. Various strategies are used to over come this.

Reason: The survey is done to assess the Knowledge, Attitude and Practices of clinicians and PG students.

INTRODUCTION

In 20th century the world is witnessing many revolution in the medical treatment and care. Even though there is increased medication which has a high success rate, there are some criteria where the medication may fail. One such criteria is the HOT TOOTH which is nothing but irreversible pulpitis[1,2]. The term "hot" tooth generally refers to a pulp that has been diag- nosed with irreversible pulpitis, with spontaneous, moderate-to-severe pain[3,4]. The main challenge in the management of hot tooth is that it can't be easily anaesthetised easily.

Pulpitis is inflammation of the dental pulp resulting from untreated caries, trauma, or multiple restorations. There are classified as two types. Reversible and irreversible pulpitis [5-7]. Irreversible pulpitis is a clinical condition characterised by the inflammation of the pulp.This condition stems from a variety of predisposing factors, including: reversible pulpitis, pulpal damage during operative procedures, or reduced pulpal blood flow due to trauma or orthodontic movement.The main reason for the anaesthetic failure is the Activation of nociceptors in the presence of inflammation. To over come this there are lot of strategy are used[8,9] . Recent research have provide various new strategy to over come this anaesthetic failure[14,15]. The main aim of the dental practitioner is to provide proper diagnosis and treatment and make the patient

Corresponding author: **Thanish Ahamed S**
Department of Conservative Endodontics, Saveetha Dental College .

free from illness. So as a dentist they must have knowledge about the hot tooth and they must know the management strategies for the anaesthetic failure of the tooth[10]. This research is done to asses the knowledge, attitude and practices of clinicians and PG students about the management of hot tooth.

MATERIALS AND METHODS

The participant of the study includes clinicians and post graduate students. A generalised questioner was prepared and they were asked to fill. There were 10 open ended question in the questionnaire. The participants were asked to answer all the questions to access them. About 200 participants actively participated in the survey. Out of 200 participants 133 (66.5%) are clinicians and 67 (33.5%) are post graduated students. The questionnaire contain questions such as reason for anaesthetic failure, there management, the tooth which is more difficult to anaesthetise and many other questions.

According to the collected data

Question 1 Participants

	Frequency	Percentage
Clinicians	133	65.5 %
Post graduates	67	33.5 %

Question 2 Awareness about hot tooth

	Frequency	Percentage
Aware	152	76 %
Unaware	48	24 %

Question 3 knowledge about hot tooth

	Frequency	Percentage
Reversiblepulpitis	48	24 %
Irreversible pulpitis	116	58 %
Other endodontic treatment	22	22 %

Question 4 Main challenge in hot tooth

	Frequency	Percentage
Cannot be identified easily	56	28 %
Cannot be anaesthetised easily	108	54 %
Cannot be treated	36	18 %

Question 5 Reason for anaesthetic failure

	Frequency	Percentage
Activation of noiciceptor	22	44%
Tooth cannot be identified	20	40%
Wrong placement of injunction	3	6%
Requires high doasage	5	10%

Question 6 The most difficult tooth to be anaesthetised

	Frequency	Percentage
Maxillary anteriors	32	16%
Maxillary premolars	52	26%
Mandibular molar	92	46%
Mandibular anteriors	24	12%

Question 7 preferred technique after the failure of IANB

	Frequency	Percentage
Intra pupal injection	64	32%
Intra ligamental injection	56	28%
Mental nerve block	28	14%
Any of these	52	26%

Question 8 Prescribed medication if debridement is not possible

	Frequency	Percentage
Strong analgesic	52	26%
Penicillins	56	28%
NSAIDS	64	32%
None of the above	28	14%

Question 9 Preferred technique to block inferior alveolar nerve

	Frequency	Percentage
Inferior alveolar nerve block	80	40%
Gow gates technique	60	30%
Vaziraniakinosis	36	18%
Otheir technique	24	12%

Question 10 Most preferred anaesthetic agent

	Frequency	Percentage
Mepivacaine	32	16%
Prilocaine	44	22%
Articaine	20	10%
Lidocaine	104	52%

Question 11 Strategy used to improve the success of IANB

	Frequency	Percentage
Placebo	48	24%
Oral medication	64	32%
High dose of anaesthetics	60	30%
Others	28	14%

RESULTS

From the above tabulation we found that approximately 76% of the participants are aware about hot tooth and 24% of the participants are unaware of hot tooth.

Out of 200 participants, majority of 58% defines hot tooth as irreversible pulpitis and 24% says as reversible pulpitis and the remaining 22% says them as other endodontic treatment. The main challenge reported by 54% in hot tooth management is the tooth cannot be easily anaesthetised and 28% says it cannot be identified easily and the rest 18% says that the hot tooth can not be treated easily.44% of the participants says that the anaesthetic failure is due to the activation of nociceptor at the site inflammation and 40% says that the anaesthetic failure is due to the lack of identification of the tooth and the remaining 10% says that it requires high dosage of anaesthetic and the rest 6% says it's due to wrong placement of injection.

Majority of the participants 46% says that Mandibular molars are difficult to anaesthetised and 26% says that maxillary premolars and 16% says maxillary anteriors is difficult and the rest 12% says Mandibular anteriors. The preferred technique handled after the failure of IANB is intra pupal injection said by 32% and 28% prefers intra ligamental injection and 14% prefers mental nerve block and the rest 26% doesn't prefers any of these technique. The prescribed medication if the debridement is not possible, the majority of 32% prescribe NSAIDS and 26% prescribe strong analgesic and 28% prescribes penicillins and the remaining 14% prescribe some other medication. The preferred technique for blocking the inferior alveolar nerve are inferior alveolar nerve block by 40% , Gow gates technique by 30% and vaziraniakinosis by 18% and other technique by 12%.

The most preferred anaesthetic agent from the most to least are as follows lidocaine followed by Prilocaine followed you Mepivacaine and the least is Articaine. 32% says that oral medication can improve the success rate and 30% says that increasing the dosage of anaesthetic can improve the anaesthetic failure and 24% prescribe placebo and the remaining 14% prefer other technique.

DISCUSSION

Above results says that awareness among hot tooth have showed marked increased in the clinicians and post graduate students when compared to previous studies. The knowledge about the hot tooth is also likely increased among them. While considering about the main challenge only 54% were correctly able to identify that the tooth cannot be easily anaesthetised and remains of 28% said it cannot be identified easily, so it's is quite low. Knowledge about the anaesthetic failure is in a very close margin.There is a difference of about 4% between the activation of nociceptor and difficulty in identifying the tooth, the former leads the table.

Many research [1] says that Gow gates technique is very successful in case of hot tooth but this research says that the participants mostly prefer inferior alveolar nerve block over the Gow gates technique and the other supplementary technique such as Vaziraniakinosis. Other research[11-13] says that Oral medication can improve the success rate of anaesthetic failure but only 32% have correctly identified this.

RESULTS

The results says that clinicians and post graduate students are aware about hot tooth but they lack knowledge in the management of hot tooth. The aim of the dentist is to provide relief and to do proper treatment. So various conferences and

CMI programs should be conducted to make the practitioners to over come the management problem of hot tooth. Hence, the clinician should have fall back strategies to attain good pulpalanesthesia when failures of the traditional techniques are encountered. This will boost the confidence of the clinician to impart and provide a relatively pain free treatment for the patients having a hot tooth

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