

Knowledge attitude and practice regarding obturation materials on primary teeth

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ABSTRACT:

Background:

The current literature and textbooks in pediatric dentistry reveal a lack of consensus on the standard of care in primary tooth pulp therapy. Normally the obturation materials consist of calcium hydroxide, glass ionomer cement, resin, mineral trioxide aggregate (MTA). These are the normally used obturating material in the dentistry. There is no one source that can claim authority regarding the philosophy and technique for primary tooth pulp therapy. The dental literature is even more diverse and perplexing. Authors of review articles, as well as textbooks used to teach predoctoral dental students, offer varying conclusions on what are the best treatment modalities for the primary tooth pulp tissue.

Aim and objective:

To assess the knowledge, attitude and practice regarding obturation materials for primary teeth among the dental practitioners in Chennai.

Methodology:

A cross sectional survey was carried among 100 dental practitioners using a questionnaire. Questionnaire contained 10 questions on assessing the knowledge, attitude, and practice regarding obturation materials for the primary teeth among the dental practitioners. The data were extracted and analysed.

Result:

Among the respondents 79% of dental practitioners are aware of primary obturation materials and 21% of them are not aware of primary obturation materials in primary teeth. 39% of the dental practitioners use calcium hydroxide as the primary obturation materials. 36% of the dental practitioners say that Zinc oxide eugenol is the most common obturation material used. 62% of the dental practitioners use Vitremer as the obturation material, 42% of dental practitioners use iodoform based root canal filling materials for obturation.

CONCLUSION:

This study shows that 79% of the dental practitioners are aware of primary obturation in primary teeth, 65% among them know the materials used for obturation in primary teeth, 36% of the dental practitioners used only zinc oxide eugenol as obturation material. However it is emphasised that dental practitioners must be aware of the other clinical parameters of obturation materials for primary teeth.

INTRODUCTION:

Infection control is a critical aspect of dental practice, including subjects that are related to the health of dental practitioners, the dental staff and patients. Dental students must learn technical and preclinical skills before they enter the clinical environment and deliver care to patients. (1) The purpose of the obturation in endodontic treatment is to prevent the reinfection of root canals that is biochemically cleaned, shaped and disinfected by irrigation, instrumentation, and medication procedure. It is essential that endodontic therapy must include sealing of the root canal system to prevent the tissue fluids in percolating in the root canal and should prevent toxic by products by both necrotic tissues and microorganism regressing into periradicular tissue. In addition, there are problems with the use of extracted human teeth because they are grossly contaminated, difficult to sterilize because of their structure, and might be damaged or altered by sterilization procedures. (2) The current literature and textbooks in pediatric dentistry reveal a lack of consensus on the standard of care in primary tooth pulp therapy. Normally the obturation materials consist of calcium hydroxide, glass ionomer cement, resin, mineral trioxide aggregate (MTA). These are the normally used obturating material in the dentistry. There is no one source that can claim authority regarding the philosophy and technique for primary tooth pulp therapy.

MATERIALS AND METHOD:

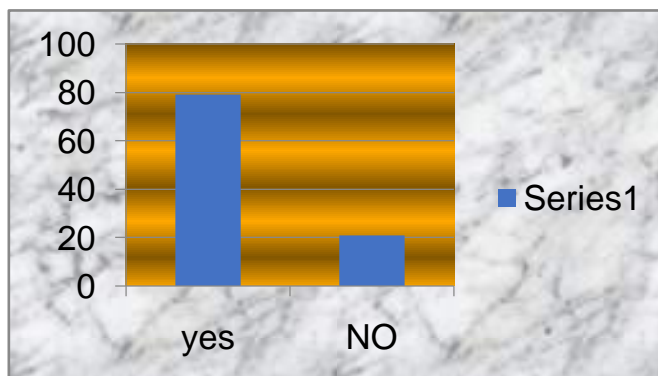
A cross sectional survey was carried among 100 dental practitioners using a questionnaire. Questionnaire contained 10 questions on assessing the knowledge, attitude, and practice regarding obturation materials for the primary teeth among the dental practitioners. The data were extracted and analysed. Individuality was assured when the subjects filled the survey. The

questionnaire was filled in the paper and pen method. After the data collection, statistical measurements are done. The questions included are

- 1). Are you aware of primary obturation in the primary teeth?
A. Yes. B. No
- 2). Are you aware of the materials used for obturation in the primary teeth?
A. Yes. B. No
3. If yes what are the materials?
A. Zinc oxide B. Mineral trioxide aggregate
C. Calcium hydroxide , D. GIC ,E. Resilion
4. Do you think different obturation materials has different effect on primary teeth?
A. Yes. B. No
5. According to you, What is the most common obturation materials used?
A. Calcium hydroxide
B. GIC
C. Zinc oxide eugenol.
D. Others
6. Why obturation materials for primary teeth have different criteria ?
A. Due to differences in the morphology of the tooth.
B. Due to difficulties in obtaining the good radiographic view.
C. Due to root resorption.
7. Are you aware of the qualities of the obturation materials in the primary teeth?
A. Yes. B. No
8. If yes, Do you use iodoform based root canal filling materials for obturation?
A. Yes . B. No
9. What should be the qualities of the obturation materials according to you?
A. Harmless to the periapical tissues.
B. Antiseptic properties.
C. Adhere to walls
D. Not shrink
E. Radiopaque
F. All the above
10. If yes, what are the materials?
A. Vitaplex
B. Endofloss
C. KRI paste.

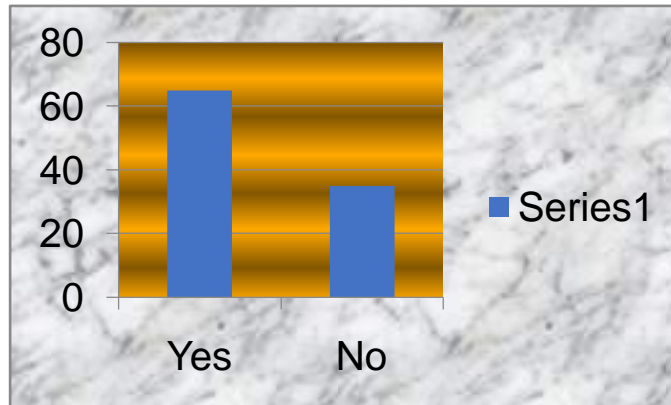
Result:

- 1). Are you aware of primary obturation in the primary teeth?



Among the respondents 79% of dental practitioners aware of primary obturation materials and 21% of them not aware of primary obturation materials in primary teeth.

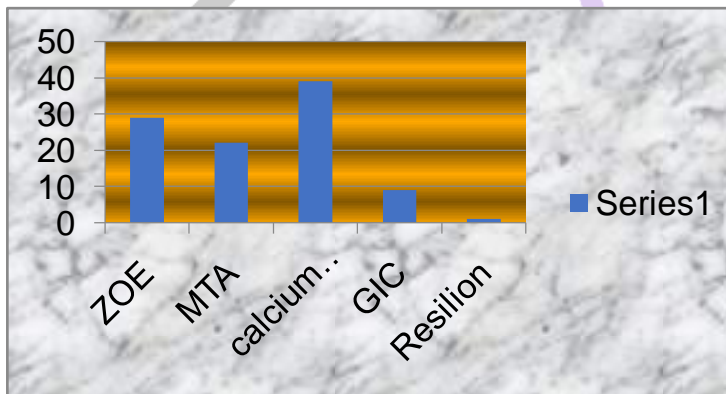
2) Are you aware of the materials used for obturation in the primary teeth?



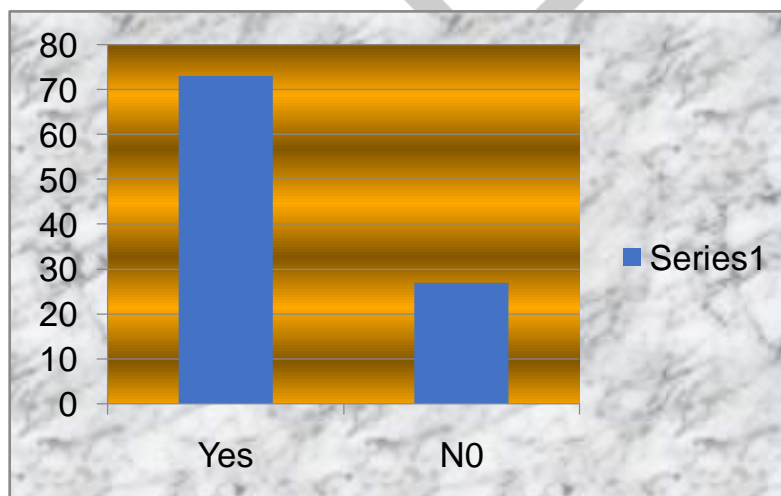
Only 65% of them aware of the materials used for the obturation in primary teeth.

3) If yes what are the materials?

Among the respondents 39% of the dental practitioners use calcium hydroxide as the primary obturation materials.



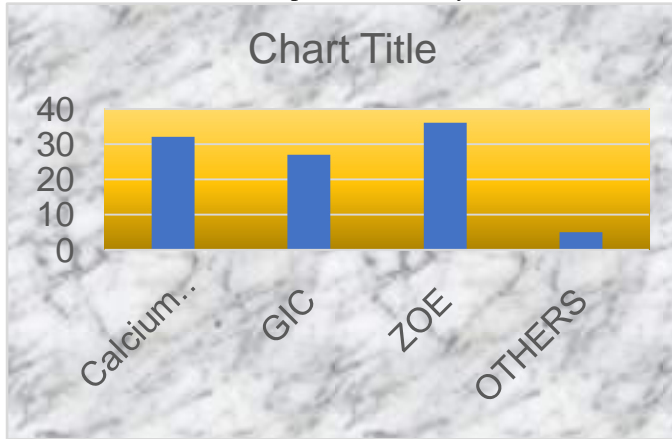
4) Do you think different obturation materials have different effects on primary teeth?



73% of the dental practitioners think that different obturation materials have different effects on primary teeth.

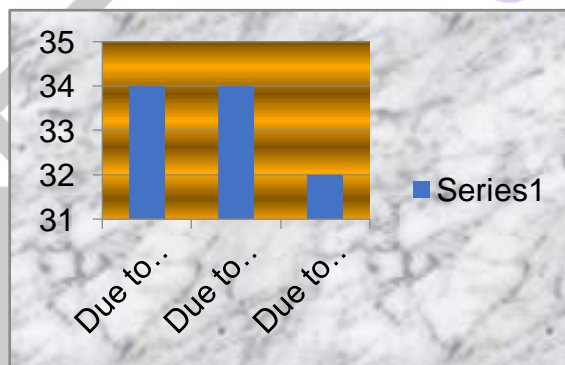
5) According to you, what is the most common obturation materials used?

Among the respondents 36% of the dental practitioners says that Zinc oxide eugenol is the most common obturation materials



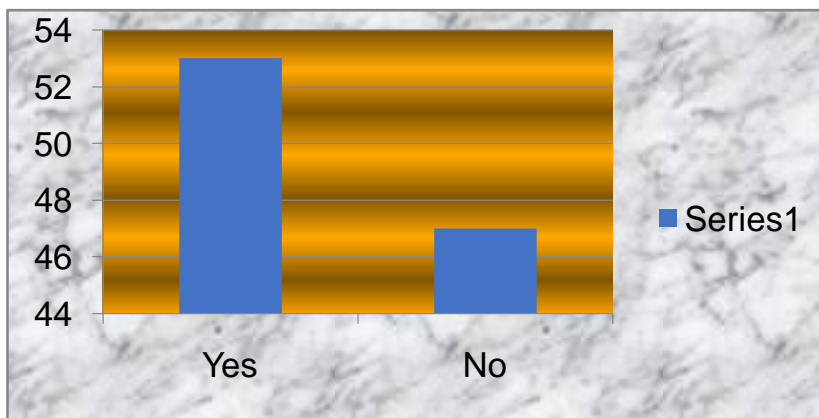
used .

6) Why obturation materials for primary teeth have different criteria?



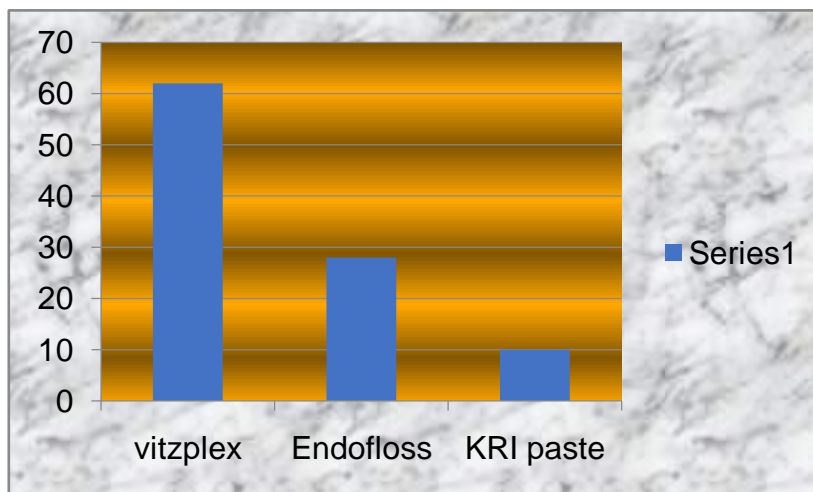
Less than 32% of the dental practitioners says that due to the root resorption obturation materials in the primary teeth have different criteria.

7) Are you aware of the qualities of the obturation materials in the primary teeth?



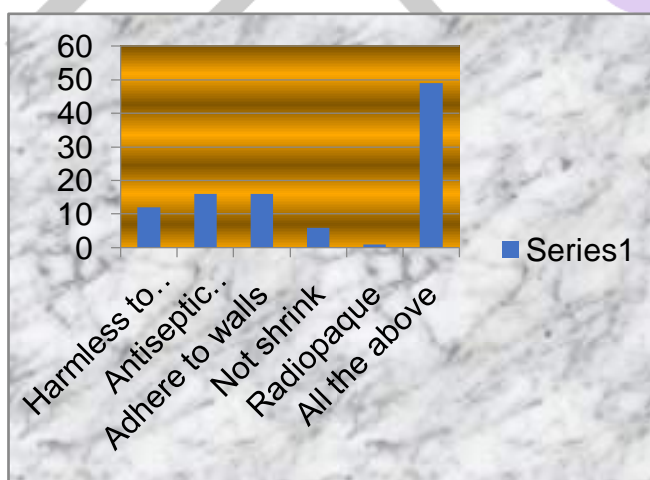
53% of the dental practitioners aware of the qualities of obturation materials in the primary teeth.

8) If yes what are the materials?



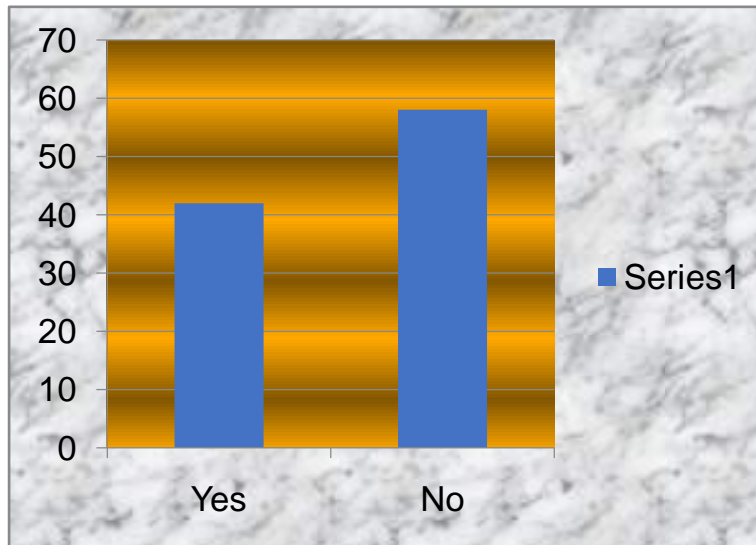
62% of the dental practitioners use vitzplex as the obturation materials

9) What should be the qualities of the obturation materials according to you?



Most probably all the dental practitioners are well known about the qualities of the obturation materials.

10) If yes, Do you use iodoform based root canal filling materials for obturation?



Among the respondents only 42% of dental practitioners use iodoform based root canal filling materials for obturation.

Discussion:

In the present study most of the general dental practitioners practice obturation procedures. The findings were higher than study conducted by Che Aziz in 2006.(3) The reason behind this could be that the present study has been conducted in 2013 as new advancement had come in the endodontics and more number of dentists attend CDE programs in endodontics. Whereas Omari' study had found 100% practice of performing Obturation among general dental practitioners in North Jordan.(4)

Dental practitioners in this survey used calcium hydroxide as the primary obturation materials for primary teeth.compared with the study conducted by the P.Devendhra patil says that Zinc oxide eugenol is the most commonly used obturating material for of the primary teeth.(5,6)

The indications, objectives, and type of obturation depends on whether the pulp is vital or non vital. It also depends on clinical diagnosis of normal pulp, reversible pulpitis symptomatic or asymptomatic irreversible pulpitis or necrotic pulp.(7)

Meticulous biomechanical preparation determines the success or outcome of root canal treatment in primary teeth; however, the resorbable nature and antimicrobial properties of the filling material determine the success of obturation in a primary tooth. Preparation of the root canal in a primary tooth is based mainly on chemical means rather than mechanical debridement.

In this study, we were interested in knowing the obturation material and the technique that dental practitionersfavoured for primary teeth. 36%preferred to do Zinc oxide eugenol material in primary teeth. When the case scenarios were presented to the respondents, in both the scenarios majority of respondents selected right treatment plan and diagnose the right condition. This reflects the awareness among the dental practitioner about maintaining the primary tooth in dental arch. They are also aware about importance of space loss in dental arch and focus more toward preventive orthodontics in pediatric patient.

The common reason for rejecting endodontic treatment in primary molars was difficulty in behaviour management (41.6%). 39.8% thought that difficulty in behaviour management and poor efforts to cost ratio are the reasons for rejecting treatment in pediatric patient. This results were supported by the survey conducted by Halawany et al.(8)

CONCLUSION :

This study shows that 79% of the dental practitioners aware of Primary Obturation in primary teeth,65among them knows the materials used for obturation in primary teeth,36 % of the dental practitioners used only zinc oxide eugenol as obturation material.However it is emphasised that dental practitioners must be aware of the other clinical parameters of obturation materials for primary teeth.

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