ASSESSMENT OF EASE OF PERFORMING COMPOSITE RESTORATION AND GIC RESTORATION IN PEDIATRIC PATIENTS

1Oviya. M, 2Dr. Madhusudhan Vasantharaj

1BDS, 2Department of Pedodontics
Saveetha Dental College & Hospitals, Chennai.

ABSTRACT:

AIM : To do a survey about the ease of dental undergraduate students in performing the treatment of composite restoration vs GIC restoration in paediatric patients

OBJECTIVE: To assess the ease of dental undergraduate students in restoring the tooth with composite vs GIC in paediatric patient.

BACKGROUND: GIC and composite are the most commonly used materials in pedodontics for restoring the tooth. Compared to composite restoration doing GIC restoration is much easier. For GIC restoration we need to prepare the cavity, apply dentin conditioner and fill the cavity using type 2 GIC, whereas for composite restoration, cavity preparation is done, etch the tooth surface and rinse it, apply the bonding agent, cure it, add composite resin in increments and each increments should be cured. Apart from doing all these procedures a dentist should also manage the child in the dental chair.

REASON: To find out which material is comfortable for the dental undergraduate students to work with.

INTRODUCTION:
Performing restoration in a child will differ from performing restoration in an adult patient. Cooperation of the child during dental treatment is very less when compared to an adult patient. The most commonly used restorative materials to restore primary teeth is glass ionomer cement (GIC) and composite resin.

Glass ionomer cement contains acid soluble ion leachable calcium fluroalumino silicate glass particles which will be mixed with polyacrylic acid to restore the teeth. It is a water based cement. Whereas composite resin is a resin based cement and it contains resin matrix, fillers and silane coupling agent.

The choice of a material to be used in a given situation in a child is usually not easy. There are a number of factors that affect the choice of material for use. These include the following:

1. Age of the patient: This indicates the cooperative ability and the length of time the material needs to stay in the mouth.
2. Caries risk: choice of material to be used in children with high risk caries will differ from the choice to be made in children with low caries risk.
3. Depth of cavity: choice of material to be used in deep cavities will differ from the one to be chose to fill shallow cavities.

This research article mainly concentrates on the assessment of ease of performing composite restoration and GIC restoration in paediatric patients.

MATERIALS AND METHOD:

Questionnaire survey was conducted at Saveetha dental college and hospitals, Chennai. Totally 150 undergraduate students were chosen for this study. The questions were framed in such a way to assess the knowledge about the restorative material and the easy level in performing the treatment. The results were calculated statistically.
RESULTS:
Participants felt that management of child during GIC restoration is easier when compared to managing the child during composite restoration since composite restoration requires lot of procedures to be done before placing the restorative material. 58.6% of participants felt Bonding strength of GIC is more when compared to composite. 72.4% of the dental undergraduate felt that performing GIC restoration is easy in paediatric patients is easy.

DISCUSSION:

- 75% of the participants felt that performing GIC restoration in a child is easier than performing composite restoration and 25% of the participants felt that performing composite restoration is easy in paediatric patients.

- 85% of the participants felt that manipulation of composite resin is easier when compared to the manipulation of glass ionomer cement. 15% participants felt that manipulation of GIC is easy.
For filling deep cavities GIC was the material of choice for 53% of the participants, composite for 44% of the participants and other restorative materials for 3% of the participants. Even previous studies states that the survival rate of GIC is better than the resin based composite. (1)

43% of the participants told that their patients were cooperative during the etching and bonding procedures.

76% of the participants felt that GIC is biocompatible.

66% of the participants felt that curing does not cause more damage to the adjacent tissues and rest of the participants felt that curing causes more damage to the adjacent tissues.
CONCLUSION:

GIC is preferred over composite in restoring the primary tooth. One of the main disadvantages in restoring the tooth with composite resin is, it’s very difficult to achieve dry field in paediatric patients to place the composite resin, whereas GIC can bond to the tooth structure even in the presence of moisture.

REFERENCE:
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