Modified Hall Technique to Reduce Discomfort: A Randomized Double-Blind Study

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Introduction

The Hall Technique is a minimally invasive method used to treat decayed primary teeth when more conventional treatments are not suitable. Unlike the traditional approach of placing stainless steel crowns, it avoids the need for caries removal, tooth preparation, or local anesthesia. However, despite its benefits, research shows that up to 80% of patients may experience discomfort during the procedure.

Innes NP, Evans DJ, Stirrups DR

Objective

This study aims to explore a modification of the Hall Technique, which involves applying a topical anesthetic (benzocaine) to the gingival sulcus before placing the crown. The goal of this modification is to reduce any discomfort patients may experience during the procedure.

Innes NP, Evans DJ, Stirrups DR

Materials and Methods

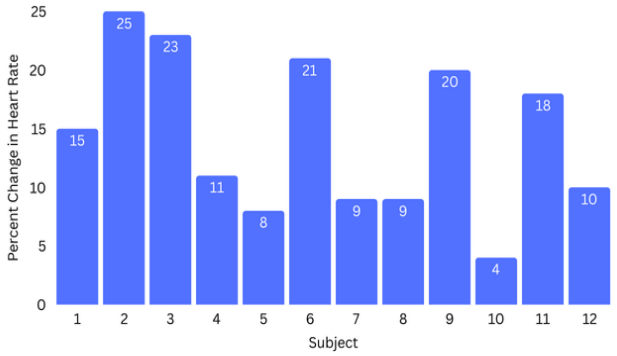
The study included children aged 5-8 with radiographic signs of large or multi-surface lesions on both primary mandibular molars. Participants were randomly assigned to either protocol A or B, with the only difference being the experimental quadrant, using block randomization. To reduce bias, the operator was blinded to group assignments.

The following variables were measured:

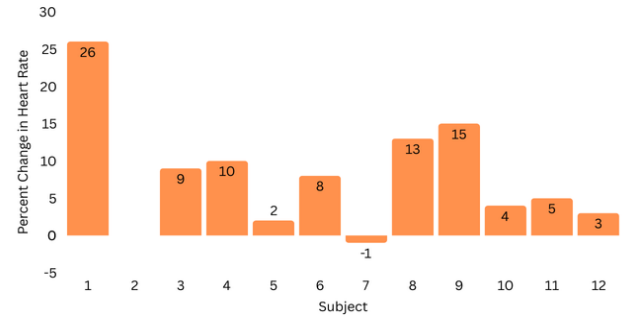
- Heart rate, recorded with pulse oximetry before and after crown cementation.
- Perceived discomfort, evaluated using the Modified Frankl Behavior Rating Scale (by the operator) and the Wong-Baker Faces Pain Scale (by the patient).

Results

Control Quadrant



Experimental Group



Conclusion

Data indicates a potential reduction in discomfort when intrasulcular benzocaine is applied before Hall Crown placement, as opposed to a placebo. There is a six percent difference in the average heart rate change between the control and experimental quadrants in the preliminary results. Further studies and data gathering are required to verify these early observations.

Baker C, Wong D

University of Wisconsin Madison BS, 2019
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