The Hall Technique

Treating carious deciduous molars with the noninvasive Hall technique, in which decay is sealed under preformed (stainless steel) crowns, avoiding injections and drilling

**Introduction**

Stainless steel crowns (SSCs) are preformed crowns, which have been used in paediatric dentistry since 1950. Until relatively recently, however, the uptake of use in primary care has been unpopular. This was primarily due to the need to extensively prepare primary teeth, the risk of damage to adjacent permanent teeth and the challenge of administering the local anaesthetic in a young child.

Dr. Norma Hall popularised a non-preparatory technique which over the past 10 years has increased in popularity and support, as a result of research papers from Innes and Evans. The technique involves no preparation or caries removal, and aims to arrest caries by sealing it from the oral environment.

No (or little) preparation reduces the risk of damage to other teeth, and often removes the need for local anaesthetic.

A modified technique could be considered in some cases—for example, breaking through a contact point to create space if separators are not available or have fallen out.

Case selection is essential in deciding whether to provide SSCs, as well as ensuring that any questions are answered in order that parents/guardians can give informed consent.

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<td>Approximal lesions in primary molars.</td>
<td>Approximal or occlusal lesions where there is no intact band of dentine visible radiographically between the pulp and the carious lesion.</td>
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<td>Occlusal lesions in primary molars where a conventional restoration is not possible due to compliance.</td>
<td>Pulpal pathology.</td>
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<td>Protection of primary molars in high-risk individuals—e.g., erosion, dental anomalies.</td>
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<td>Band of intact dentine visible radiographically between the pulp and the carious lesion.</td>
<td>Unusual crown morphology.</td>
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<td>Uncooperative child.</td>
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<td>Second primary molars where the first permanent molar has partially erupted or risk of impaction.</td>
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A 5-year-old patient was referred to Community Dental Services requiring treatment for multiple carious lesions. Her dentist reported poor cooperation and an abscess on the lower right side. Following an urgent appointment for an emergency nonvital pulpotomy on the lower right first deciduous molar (LRD), assessment and treatment planning was carried out.

Extensive preventative advice was completed with a hygiene therapist. The restorative treatment plan included multiple Hall crowns on the restorable carious molars. Extractions were eventually indicated for both lower first primary molars. These were ultimately performed under inhalation sedation.

**Case study**

**Hall technique to restore LRE**

The following series of clinical photographs demonstrate the restoration of the lower right second primary molar (LRE) using the Hall technique.

**Common Questions from Parents/Guardians**

**Q: How long will the ‘loom bands’ be in?**
**A:** Usually around 3–5 days. (It can be helpful to call separators ‘loom bands’ because most kids and adults know what loom bands are.) I don’t like separators being in for more than one week. I’ve seen separators that have been in for a few months!

**Q: What if the ‘loom bands’ fall out before our next appointment?**
**A:** It is possible that they may fall out. If they have fallen out recently, sometimes there is still space to place the SSC. If there isn’t, I will either place them again, or I may make some adjustments to the tooth so that the crown can be fitted.

**Q: Will the crown damage the adult tooth underneath?**
**A:** No. (The change in occlusion is thought to be from the intrusion of the primary teeth, but there is no evidence to show it affects the developing dentition.)

**Q: When will it stop hurting?**
**A:** There may be ‘tightness’ or discomfort for up to a week. Appropriate analgesic relief during this time is recommended.

**Q: When will the bite get back to normal?**
**A:** Many will get used to the small change in occlusion within a few days, but it can take 2–4 months, depending on the individual.

**Q: Will the crown fall off?**
**A:** It should stay on until the tooth exfoliates naturally. (I’ve had a few cases where a child has ground through the crowns, but this is fairly rare.)
After cementation, it is important to give postoperative instructions to the patient and parents/guardians, which will include:

• Instructions for a soft diet for the rest of the day.
• Recommendation for analgesia for up to a week after placement as required.
• Reassurance that any blanching will dissipate within a day and the occlusion will stabilise over the following weeks.
• Reassurance that any changes to the bite will self-resolve.

Conclusion

The Hall technique is a simple and child-friendly technique that general dental practitioners should provide under the newly commissioned paediatric dental services (NHS England, 2017) for appropriate cases.

As a young dentist, I found learning this method and implementing it is actually much less technical than many of the treatments we provide every day.

What is more challenging for many dentists is managing the patient. Treating children doesn’t always come naturally, but after practice you will learn what works for you. After a while, fitting ‘twinkly teeth’ will be second nature!

Products used

• 3M ESPE Stainless Steel Crown Primary Molars • GC Fuji I Luting Glass Ionomer Cement