

Caring for children: little teeth, big challenges

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Helen Rodd will be speaking about this topic on Thursday 26 April at the 2012 British Dental Conference and Exhibition, held at the Manchester Central Convention Complex.

BDA CONFERENCE

Dental care for young children with carious primary teeth may pose a number of challenges in terms of assessment and diagnosis, behaviour management and treatment planning. These challenges, together with some misconceptions about the value of restoring the primary dentition, have led to a reduction in the proportion of restorations provided for young children in primary care settings. The aim of my presentation at the forthcoming BDA conference is to provide an overview of current practices for caries management in young children. It will particularly focus on restorative interventions, including preformed metal crowns (using the Hall technique), and will consider the evidence-base for a variety of restorative options. In addition, the child's perspective of restorative care will be considered.

The need to restore the carious primary dentition remains an area of considerable controversy and debate. Huge disparity exists between how British general dental practitioners manage carious primary teeth compared to permanent teeth.¹ Indeed, recent data show that only around 10% of carious primary teeth are actually filled. In contrast, paediatric dentists strongly advocate a restorative approach, their case-mix being largely comprised of children suffering from the sequelae of untreated caries. A multi-centre randomised controlled trial (the FiCTION trial) is currently underway to explore the effectiveness of a restorative *versus* a preventive strategy for the primary dentition, the findings of which should have great public health significance. Furthermore, there is increasing basic science research to support the potential of the primary tooth pulp for healing and repair, even though it is a 'temporary' structure destined for physiological root resorption and exfoliation.² Many myths about the pain processing potential and inflammatory responses of

the primary tooth have now been dispelled and treatments should strive to be much more biologically compatible.

A RESTORATIVE *VERSUS* PREVENTIVE APPROACH

Undoubtedly, there are many challenges in providing restorative care for young children in primary care settings, not least time and financial constraints, as well as a perception that children may not cope well with treatment. A number of studies have explored the barriers to treating children in practice and have revealed some fascinating insights.³ However, good decision-making, evidence-based restorative choices and a child-friendly approach will maximise successful clinical and patient-reported outcomes.

In my presentation at the forthcoming BDA conference, I will be highlighting the importance of decision-making for young children and will consider what patient-related and clinical factors indicate a restorative approach. There are situations where even a specialist paediatric dentist would not get a hand-piece out! It should also be stressed that an individualised preventive strategy should always be in place, as this provides the foundation of any treatment plan. The range of restorative materials available for the primary

dentition will be described, taking into account each of their advantages and limitations. The current literature will be reviewed for the best evidence-base practice and outcomes.

It is interesting to reflect on how little amalgam is now used in the primary dentition; indeed it is actively discouraged in some countries. The advent of adhesive materials has largely contributed to the demise of amalgam as they offer a more cosmetic and, of course, a mercury-free alternative. However, glass ionomers in particular may lend themselves to abuse, and ultimately high failure rates, through poor clinical technique.

PREFORMED METAL CROWNS

Another restorative choice for carious primary molars is the preformed metal crown (previously known as stainless steel crowns) (Fig. 1). This is further area where there have been marked differences in the practices adopted by general practitioners and specialists. It has certainly not been a popular option in practice, with practitioners viewing preformed metal crowns (PMCs) as technically difficult, time-consuming and unacceptable to parents. In contrast, the PMC is viewed as the restoration of choice in specialist practice for the high-carries risk child and

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following any pulp therapy procedure.⁴ More recently, however, the development of the Hall technique for PMC placement has started to stimulate some enthusiasm for this restoration in primary care settings. The technique involves placement of a PMC without any local anaesthetic or tooth preparation; the child simply bites the crown (filled with glass ionomer cement) down between interproximal contacts. Five-year clinical outcomes have recently been published for Hall-placed PMCs, showing them to significantly outperform intra-coronal restorations.⁵ The technique is now widely taught within the undergraduate curriculum but it remains to be seen whether newly qualified dentists will continue to embrace PMCs in the 'real world'.

CHILDREN'S VIEWS

Other important considerations in managing the young patient are the views and experiences of children themselves. There has been increasing recognition that children and young people should have a voice in treatment decisions and their perspectives should be sought in developing and monitoring services. It is exciting to see this ethos being increasingly reflected in clinical audit and service evaluations as well as oral health research.



Fig. 1 A 4-year-old girl with severe early childhood caries showing restoration of the second primary molars using the Hall technique for preformed metal crown placement and intensive preventive strategies to arrest the remaining carious lesions

Investigators are encouraged to evaluate patient-reported outcome measures as well as the more traditional biomedical ones. Sheffield Dental School supports a multi-disciplinary research team who aim to actively involve children and young people in dental research and my presentation at the BDA conference will describe how young children's perspectives are

being sought in the restoration of their carious dentition.⁶

CONCLUSION

For me, there is nothing more rewarding than providing high quality restorations for young children, and to see them happily accept treatment. I hope that delegates attending this forthcoming conference lecture will be reassured that the challenges of looking after 'little teeth' are easily overcome. Surely our goal should be to end the dismal situation of thousands of children requiring multiple extractions under general anaesthetic every year.

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