

Molar-Incisor Hypomineralization

I am often privileged to treat a lot of children as a dental therapist and find that I am frequently presented with a child displaying evidence of molar-incisor hypomineralization (MIH). Put simply this is a condition which affects one to four of the first permanent molar teeth and is also often associated with the incisor teeth. These teeth appear clinically to have soft porous almost chalky enamel and has been described to look like old Dutch cheese with yellow or brown defects. Clinical appearance differs greatly between patients and also between each individual tooth affected however there is usually always a well-defined demarcation between sound and affected enamel.



Clinical appearance of a hypomineralized first permanent molar

The aetiology of MIH is still quite unclear however a number of factors such as low birth weight, early childhood vaccinations and problems during pregnancy/birth have been suggested. Unfortunately no clear conclusion can be made as to the causation of MIH and it may be reasonable to assume a combination of factors play a part.

Teeth presenting with MIH can prove challenging to many clinicians due to their increased risk and fast progression of caries, the unpredictable presentation of defects and often difficulty anaesthetising these teeth due to an increased pulpal reaction to stimuli. The children affected can also struggle with sensitivity making brushing and plaque removal difficult and ultimately contributing to caries occurrence and progression.

Another difficulty faced by the clinician is deciding on the best way to manage these teeth. Of course as with any dental disease prevention and education should be the first port of call for all clinicians. Prevention of pain should be paramount. By utilising a skill mix approach the dentist can refer these patients to the dental nurse and/or dental therapist for regular oral hygiene and diet advice and also applications of fluoride varnish. Glass ionomer sealants can also be placed. Education for parents and the child is vital to ensure they are aware of the increased risk of decay in these teeth. Once carious lesions have become established restoration of the tooth may be required.

After profound anaesthesia has been achieved, adhesive restorations such as resin modified glass ionomer and composites where sound enamel can be distinguished should be considered as there is potential for the margins of amalgams to become compromised due to irregular presentation of affected enamel. With good patient co-operation stainless steel crowns can be placed in some circumstances. If more than one molar is severely affected with poor long term prognosis, it may be wise to consider planned extractions alongside an orthodontic opinion. The ideal time for this is around the ages of 8½ to 9½ years again making early detection key.

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References

Weerheijm, K. L. Molar Incisor Hypomineralization (MIH): Clinical Presentation, Aetiology and Management. *Dental Update* 2004, 9-11.