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New era for MIH research and patient management

A new research initiative is being established to take the dental profession's understanding of molar incisor hypomineralisation (MIH) and its impact on patients into a new era. Led by Greig Taylor, a BSPD member and Chairman of CONNECT, a research collaborative for trainees, the initiative will bring together academics keen to share knowledge as well as to gain the input of children and young people in optimum management of the condition.

A common childhood condition, MIH causes weakened tooth enamel, usually in one or more of the first permanent molars, which are more prone to dental decay as a result; incisor teeth can be affected too.

Until the turn of this century, teeth with weakened enamel might have been referred to as 'cheesy molars' due to their pitted appearance. A seminal paper (1) published exactly 20 years ago, however, established the use of the classification molar incisor hypomineralisation.

There have been numerous studies of MIH in recent years including a paper (2) in 2017 which showed that the global burden is high. Evidence from a paper (3) in the International Journal of Paediatric Dentistry (based on 70 studies) suggests that the prevalence in children is roughly 14%.

Another important development from the last two decades is the development of BSPD's position statement (4), launched in January 2020, ensuring that the condition is widely taught and recognised. According to our position statement, about one million children in the UK have teeth that are affected by MIH and in most cases, the treatment can and should be managed in primary care. Only the most severe cases or those which require multidisciplinary management should be referred into secondary care.

The European Academy of Paediatric Dentistry undertook a systematic review to understand worldwide trends in the scientific evidence around MIH and gaps in knowledge with a view to guiding future research on the topic. Its updated policy document (5) to which BSPD's Mr Taylor, Dr Cheryl Somani and Professor Ferranti Wong contributed, has just been published.

Mr Taylor said the knowledge gap that has been identified is around a shortage of clinical studies on treatment, mainly extractions, and on the patient's quality of life. He added: "There is definitely a genetic component to MIH but we still don't fully understand what causes it. Our best course of action is to focus on prevention and early identification."

He is now in discussion with other BSPD academics interested in working together in the UK and internationally to develop the evidence base further. Professor Claire Stevens, spokesperson for BSPD, said: "We see high numbers of children who have MIH and need treatment. I am delighted that Greig and others are going to be working together to fill the knowledge gap on MIH and to ensure that the advice and resources that we develop for our young patients are co-designed with them."

1) Weerheijm K L; Jalevik, B; Alaluusua, S. Caries Research; Basel Vol. 35, Iss. 5, (Sep/Oct 2001): 390-1.
2) https://pubmed.ncbi.nlm.nih.gov/29221956/
3) https://onlinelibrary.wiley.com/doi/abs/10.1111/ipd.12323
4) https://www.bspd.co.uk/Portals/0/MIH%20statement%20final%20Jan%202020.pdf
5) https://pubmed.ncbi.nlm.nih.gov/34669177/

Note to editors

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