WHY MOLAR INCISOR HYPOMINERALIZATION IS A PUBLIC ORAL HEALTH PROBLEM

It was only about two decades ago that the term "Molar Incisor Hypomineralization"(MIH) was used for the first time in the literature (1). Nevertheless, in this short period of time, it has become one of the most challenging oral health problems for researchers, clinicians and, inevitably, for policy makers.

In terms of research, many questions about the condition remain unanswered. Until now, for example, MIH etiological factors are not fully understood. The evidence indicates that problems during the pre, peri and post-natal phases might be related to MIH occurrence (2). It is also believed that a genetic component may play an important role in its development (3). However, for a better understanding on the subject, well-designed prospective studies are still needed.

For the clinicians, the challenges are many, ranging from its diagnosis to its clinical management. MIH is a developmental defect of the enamel (DDE) that manifests clinically by means of demarcated opacities. However, not all demarcated opacity detected in a tooth is a sign of MIH. If we consider strictly the definition of the condition provided in 2001, it is mandatory that at least one 1st permanent molar is affected, while the permanent incisors may be involved or not. But, what has been observed over the last years, is that similar characteristics have been described for primary teeth, both canines and second primary molars (4), and also for other permanent teeth, such as second permanent molars (5). Therefore, the very definition of MIH might lead to some confusion. Still about diagnosis, for non trained eyes, MIH can be confused with other DDE, such as dental fluorosis (6) and as to more severe cases, when a post-eruptive enamel breakdown is already present, it can be easily and erroneously diagnose as hipoplasia. Having said that, it is unquestionable the need of including MIH as a mandatory topic in the dental curriculum, as well as, to provide good training for dentists who are already in the field.

With respect to the clinical management of MIH, a diverse range of challenges, from the quality of the affected enamel (more porous and with a lower mineral content in comparison to sound enamel) that might lead to post-eruptive breakdown to the patient's behaviour (usually, a child who presents MIH needs to see the dentist many more times than those who do not have MIH) are observed. Moreover, up to date, a standardised protocol to treat the different levels (mild, moderate and severe) of MIH is not available. As a matter of fact, no even a consensus among the researchers about the classification of MIH severity levels exists.

Considering all that was mentioned above, and also taking into account that untreated dental caries in permanent teeth affects more than 2 billion people around the world (7), the progression of MIH from a mild stage (demarcated opacity) to a more severe stage (post-eruptive breakdown with carious lesion associated) acts as a complicate factor for the already complicated oral health public sector. Using Brazil as an example, it is known that the majority of the population can not afford visiting a private dentist nor can pay a dental insurance, depending exclusively on the public sector to have access to oral health care. On the other hand, the oral public health centres are already overloaded with the current existing demand of patients. Thus, without a strategic planning to incorporate MIH as one of the oral health problems to be immediately tackled, it is not pessimistic to say that in 10 years, we will have a generation of young Brazilians without the 1st permanent molars in mouth, not lost due to caries, but to MIH. Which direction to follow? This a point of discussion, but why not screening the affected children in schools and implement an oral health program to monitor them closely?

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