

Appropriate Age to Examine Molar Incisor Hypomineralization in Thai Children

Kasamon Satchapong¹, Patimaporn Pungchanchaikul¹, Onauma Angwaravong¹, Nussara Chansamak², Ratchanekorn Savisit³, Waranuch Pitiphat²

¹ Department of Pediatric Dentistry, Faculty of Dentistry, Khon Kaen University, Khon Kaen, Thailand

² Department of Community Dentistry, Faculty of Dentistry, Khon Kaen University, Khon Kaen, Thailand

³ Dental Health Division, Samsong Hospital, Khon Kaen, Thailand

Objectives: The European Academy of Paediatric Dentistry (EAPD) suggested that Molar Incisor Hypomineralization (MIH) should be examined at eight years of age, at which time most of the children would have all first permanent molars (FPM) erupted. However, delay in diagnosis could lead to an underestimation of MIH prevalence since dental caries and post-eruptive enamel breakdown might mask the MIH lesions. This longitudinal study aimed to determine the best timing for MIH examination by comparing the prevalence and clinical characteristics of MIH in a birth cohort of Thai children who were examined three times at the ages of 6, 7 and 8 years.

Methods: The study was conducted in children who participated in the Prospective Cohort Study in Thai Children. The analysis included 519 children who received oral examinations according to the EAPD criteria in three consecutive years.

Results: Among the children who had at least 1 erupted FPM, the prevalence of MIH was 19.4%, 19.0% and 19.3% when they were 6, 7 and 8 years old, respectively. Among those with all 4 FPMs erupted, the prevalence was 21.2%, 18.8% and 19.3%, respectively. Demarcated opacity was the most common characteristic found at all ages. The second most common lesion was post-eruptive enamel breakdown that was increased in occurrence with advancing age. The mean numbers of FPMs affected with MIH were similar at all time points.

Conclusions: The prevalence of MIH examined at 6, 7 and 8 years of age are comparable. However, the defects become more severe as the children's age increases. Early detection of MIH is important to prevent the enamel breakdown and subsequent dental caries. Therefore, the MIH examination should be performed as soon as the FPMs erupted at 6-7 years of age.

Keywords: Molar Incisor Hypomineralization, MIH, prevalence, longitudinal study