

# **Prevalence, Distribution, Caries lesion severity and Salivary Characteristics of Molar Incisor Hypomineralization - A Cross Sectional Study**

## **ABSTRACT**

### **AIM**

The aim of this study was to determine the prevalence of Molar Incisor Hypomineralization (MIH) in school children aged 8 to 12 years in Tiruchengode, Tamilnadu.

### **METHODOLOGY**

In this cross sectional study, a total of 4571 children aged 8 to 12 years from various private and government schools were included. Hypo-mineralized permanent molars and incisors were diagnosed clinically based on the European Academy Pediatric Dentistry (EAPD) criteria recommended in 2003 and revised at an Interim Seminar and Workshop concerning MIH organized by the EAPD in 2009. The caries severity was assessed by using International Caries Detection Assessment System II scoring criteria. The saliva and plaque sample of 50 children with MH and 50 children with MIH was collected in a sterile container by spitting method. Similarly the saliva and plaque sample of the 100 control group children (same age and gender) was collected and compared with the study group children. Hannah pH meter was used to calculate salivary pH, plaque pH and salivary buffer capacity. Ericson's test (1959) was employed to determine the salivary buffering capacity. The data were collected and subjected to statistical analysis.

## RESULT

The prevalence of enamel defects (MIH and MH) was 5.25% in the age group of 8 to 12 years in Tiruchengode district. The prevalence of enamel defects was found to be higher in boys (6.42%) when compared with girls (3.97%). The prevalence of dental caries in children with MIH/MH was 52.1% (n=123 children). The mean plaque pH of MIH / MH children was significantly higher than control group ( $p = 0.001$ ). The mean salivary pH of MIH / MH children was significantly lower than the control group ( $p = 0.001$ ).

## CONCLUSION

MIH is a widespread problem all over the world. In the present study MIH and MH was found in 5.25% of children examined (n=4495) with boys 3.33% (n=150) and girls 1.91% (n=86).