Third molar agenesis among children and youths from three major races of Malaysians

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Abstract:
Background/purpose: Third molar (M3) agenesis is linked to the evolution and growth of the human jaw, as it is the last tooth to develop in the human dentition. The aim of this study was to determine the prevalence and distribution of M3 agenesis in a Malaysian population. Materials and methods: Panoramic radiographs of 734 dental patients aged 10-19 years who were examined for the presence or absence of M3. The frequency of M3 agenesis was calculated by ethnic group, gender, and tooth location. Odds ratio and Pearson Chi-square at a level of significance of 0.05 were used in the Statistical Package for Social Sciences. Results: A quarter of the study population had at least one incidence of M3 agenesis. The highest was seen among the Malaysian Chinese followed by Malaysian Malays and Malaysian Indians. More females than males were missing their M3. The incidence of missing M3s was highest in the right maxillary region followed by the left maxillary, left mandibular, and right mandibular regions. The Malays and Indians showed a greater tendency towards agenesis of maxillary M3s. However, among the Chinese, M3 agenesis was equal in both arches. The findings show that the Chinese were twice as likely to have mandibular M3 agenesis as the Indians. Conclusions: The presence or absence of a tooth might not only be influenced by ethnic origins but also by culture and dietary practices. With more missing M3s, the burden of managing diseases, complications, and treatment costs associated with this particular tooth decreases. However, the use of M3s for age estimation, forensic identification, and legal purposes could be compromised in the future.

Author
- John, J.
- Nambiar, P.
- Mani, S. A.
- Mohamed, N. H.
- Ahmad, N. F.
- Murad, N. A.

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