Third molar age estimation in young adults of Chinese ethnicity in Malaysia

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ABSTRACT

Background: Studies on crown or root growth and maturation stages of third molar involving various populations have been carried out by a number of researches. Malaysia is a country of multiple ethnic groups. Malay is the largest community, followed by Chinese, Indian and other ethnic groups. Previously in Malaysia, a few researches were carried out on age estimation using third molar teeth. However, to this date, while studies on Malay population has been done by others and Indian population is studied by other researcher ,no studies were done specifically on Chinese population, which is the second largest ethnic in Malaysia. The aim of this study is to establish a database reference of the age estimation method using third molar development in the adolescent and young adults of Chinese ethnicity in Malaysia.

Materials and methods: A sample of orthopantomograms of Chinese young adults with Malaysian citizenship were collected. The age categories were between 14 to 24 years old. Samples were taken from a number of government hospitals and clinics around peninsular Malaysia. Scoring technique developed by Gleiser and Hunts (modified by Kohler) will be applied to assess the developmental stage of third molars. Statistical analysis will be conducted to evaluate inter- and intra-observer reliabilities, to establish a regression formula for age estimation of Chinese young adult, to test the difference between chronological age and estimated age and performance of the derived formula.

Hypothesis of research: This research which is still in progress ,try to obtain the referral database for dental age estimation of Chinese sub-adult population in Malaysia . From this study, a regression formula will be generated. The performance of the derived formula will then be assessed. The outcome from this study can then be used in estimating age of Malaysian individuals of Chinese ethnicity. In addition to that, it can also be used for future research involving age estimation or comparisons for age estimation studies involving individuals of Chinese descendant from other countries or with Malaysians from different ethnicity.