A PILOT STUDY OF DEVELOPMENT OF PERMANENT TEETH IN MALAY CHILDREN BETWEEN 7-15 YEARS

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Introduction:
Tooth formation is widely used as a growth marker and allowing assessments between individuals and populations in dentistry. Of all growth systems tooth formation has the highest time stability and as such provides the most accurate way of calibrating growth and development. Developmental defects of teeth are numerous and associated with various systemic and local conditions.
Like any other human biological characteristic, dental formation has a regional or large scaled geographic variation.. Numerous studies have been done in various parts of the world, establishing normal time of various stages of tooth development for local populations. Dissection data and radiographs are the two methods used for such studies. By understanding the normal sequence and patterns of tooth development, it is possible for clinicians to identify deviations from normal and apply these facts in their daily clinical dental practice.
The sequence and age of eruption of permanent teeth in a similar population have been studied by Abdullah,N et al. It is the aim of our study to further enhance on the information obtained from the above study by analyzing the different stages of permanent tooth development (Nolla's stages/ Demirjians' standards) including root development, by a radiographic method.

Objective:
1) To establish normal average age of different stages of tooth development, using Nolla's stages and Demirjians's standards, in selected teeth of the permanent dentition.
2) To study if the above methods can be used to derive dental age, in a Malaysian population.
3) To study when root completion takes place after eruption into the oral cavity both in single and multirooted teeth.
4) To study the final average radiographic root length of normally developed teeth.

Outcome:
1) To establish the stages of tooth development at different ages in a Malay population.
2) To establish the normal age of root completion after eruption in a Malay population.
3) To establish normal radiographic root length of single and multirooted teeth and further apply this knowledge clinically.
4) To look for the feasibility of using a software to analyse radiographs for better standardization of results.

Track record:
Screening of primary students and secondary students were done in local schools to select children based on inclusion and exclusion criteria. Currently the selected students are being examined clinically and radiographs of the dentition are being recorded. Fifty five such students have been examined so far.