6th Hiroshima Conference
on Education and Science in Dentistry

1965 - 2015
50th Anniversary Commemoration

BioDental Education and Research
Towards the Next 50 Years

Hiroshima University
Faculty of Dentistry
D-28 (11-10) Assesment of Dental Emerge Base on Age in Sundanes People Using Panoramic Radiograph

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BACKGROUND: Determination of the age, in some cases example disaster it is necessary, considering that Indonesia is a country vulnerable to natural disasters. Determination of the age can be made by several techniques which are based on the age of the existing teeth in the mouth. Research on the growth and development of the anterior teeth is sufficient a lot, as well as the molar teeth, but in contrast to the premolars. Research on the growth and development of the premolars are still rare. The aim of this research is to assessment of dental Emerge Base on Age in Sundanes People Using Panoramic Radiograph.

MATERIALS AND METHODS: This study used a method description with technical survey, conducted in the first and second premolars. The population is all of the data radiographs were aged 9-14 years. Data obtained by Emerge of the first and second premolars associated with age. The data is then processed and displayed in the form of tables and graphs.

RESULTS: Based on the results shown, there are differences in dental Emerge different picture from every different age groups, and the increasing age, the dental emerge differently.

CONCLUSION: Growth and development of the first and second premolars using panoramic radiographs may help determine the age of a person.

Key words: Dental Emerge, age, growth and developmental of the teeth

D-29 (12-1) Load-deflection Characteristics of Bent Nickel Titanium Wire

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BACKGROUND: When leveling severe crowded teeth with nickel titanium (NiTi) wire, the more severity of displacement, the high force the wire exerts. Resulting in high chance of root resorption and periodontal destruction. Bent NiTi could produce the lower deactivation force with the less side effects.

OBJECTIVES: The study was designed to determine the natural characteristics of load-deflection rate of bent NiTi in different amount of bending and amount of deflection at 0.5 mm after deactivation.

METHODS: The three-bracket bend test was performed with an Intron universal testing machine (AMETEK Lloyd Instrument Ltd., Hampshire, UK) in an environment of 37°C with the 10 N load cell and the crosshead speed of 1 mm/min. Two brackets were bonded on an acrylic block with 8 mm span and the central one was bonded on the acrylic crosshead.

0.012" bent superelastic NiTi (SuperElastic Regular Force, Highland Metals) with the placement of bends at 1 mm, 2 mm and 3 mm were tested at the same amount of total deflection at 1, 2, 3, 4 mm.

RESULTS: No hysteresis presented from 1.2 and 3 mm bent NiTi at 1 mm deflection. When amount of bends and the amount of deflections increased, the wires showed no springback characteristics. Bent NiTi with the placement of 1 and 2 mm bends produced lower forces.

CONCLUSION: To reduce the force of superelastic NiTi, try to reach 50-60 g, bending of 1 and 2 mm in NiTi is recommended.