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FORENSIC ASPECT OF DENTAL ATTRITION AND AGE ESTIMATION

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BDS (Sri Lanka), DGDP

A thesis submitted in fulfillment of the requirements for

the post graduate degree of

MASTER OF PHILOSOPHY

in the Faculty of Medicine

University Of Peradeniya

Sri Lanka

2005



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ABSTRACT**FORENSIC ASPECT OF DENTAL ATTRITION AND
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Estimation of age in the living and dead is an important task in routine medico-legal practice. Age could be estimated by studying the stages of tooth development and eruption by histological, morphological and radiological methods up to 18 – 20 years of age.

The only macroscopic method in which age could be estimated using teeth after the age of 18 years is by dental attrition which is defined as wearing of the tooth surface due to masticatory forces.

Available literature reveals several studies on the estimation of age using dental attrition in other countries but no studies have been carried out in Sri Lanka.

The present study was carried out in two medical institutions in the Gampaha District during the period from January 2002 to December 2003. The study sample consisted of 500 patients selected on a random basis from 2250 individuals attending the out patient's departments (OPD). The sample was divided into 5 different age groups. A Data Recording Sheet was used to collect the socio-demographic and attrition data. Attrition scores were recorded by the investigator throughout the study using Takei's method with certain modifications.

Individuals under 20 years of age, living outside the Gampaha District, in severe illnesses and marked malocclusion and jaw deformities were excluded from the study. In addition some were excluded due to inadequate number of teeth in the oral cavity and poor compliance.

Mean attrition scores were calculated separately for males and females in each age group. In general, differences in the attrition scores between males and females were not statistically significant.

Comparison of attrition scores between different educational groups did not show any significant differences. Mean attrition scores between betel chewers and non-betel chewers were also compared. Although the attrition scores in betel chewers were higher differences between the values were not statistically significant. Further studies are recommended with larger samples.

Regression lines were drawn using attrition scores for three groups of teeth separately for maxilla and mandible for all five age groups. With the help of the regression curves equations were obtained to estimate age of individuals having different groups of teeth. Common attrition patterns were prepared in a form of a chart separately for maxillary and mandibular teeth.

The equations and charts obtained from this study could be used in the estimation of age in the living and dead especially in medico-legal work.