ROLE OF DENTAL RADIOGRAPHS IN DENTAL AGE ESTIMATION

Age is an essential factor that plays an important role in every human being and identifying the individual. Age can be determined in various ways such as chronological age, dental age, and skeletal age. In living individuals, age estimation is done to detect the actual age for any premature births, adoption, illegal immigration, pediatric endocrinopathy, and orthodontic treatment. In cadavers, age estimation is done to identify the victims of mass disasters, fire crashes, and accidents. Radiology plays an important role in human age determination. Since 1982 dental radiographs are used in age estimation. The most in-destructive part of the body is the teeth which remain unchanged for many thousand years. Radiographic interpretation of the development of teeth is more reliable than skeletal development because teeth are less susceptible to nutritional, and pathological changes, especially in children. Age estimation using radiographs can be done by analyzing the developmental stages of dental elements. There are several methods employed to evaluate the dental age of an individual. Radiological interpretation involves the formation of the root, crown structures, stage of the eruption, pulp, root length, and the width of the root, pulp.[1,3] Kvall et.al

1995 reported a method that estimates age by morphological measurements of individual teeth using panoramic radiographs.[2] In prenatal, neonatal, and postnatal, age estimation can be done by analyzing various stages of mineralization of deciduous teeth.[1,3] The radiographic analysis is useful in estimating the age of children and adolescents as well as clinical emergence of the teeth, open apices, pulp to tooth ratio, and development of the third molar.[1,3,4]

CONCLUSION:

This article provides an overview of the various radiographic methods used to identify the age of the individual. In recent years, machine learning using radiographs is used in estimating the age of the individual. These techniques extract data automatically. The methods discussed in this article are the basic methods to estimate the age of an individual using dental radiographs.

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