Chapter 9

ANALYSIS OF DENTAL FINDINGS FOR AGE ESTIMATION PRACTICES IN PRENATAL PERIOD

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INTRODUCTION

Age estimation of individuals is one of the basic procedures followed in forensic cases. Different techniques are applied for each age group in the age estimation analysis of identification studies. The age estimation contributes to the three main subjects of the forensic aspect: evaluation of skeletal maturity, identification of secondary sex characteristics and observation of dental development (Black & al., 2010).

With forensic odontological approaches, age estimation is possible in different age groups. There are more methods for adults and the reliability of each method is different (Singh & Singal, 2017). Age estimation practices for prenatal period are limited due to lack of samples and ethical conditions. In addition, indicators that can be followed for age estimation in fetuses are more complicated than other age groups.

The purpose of dental age estimation in fetuses is to evaluate the preterm birth and abortion cases (Prathap, 2017). Fetal dental age estimation is of great importance in determining live births. Dental development, formation of ossification centers and development of long bones are basically evaluated for age estimation in fetuses (Ubelaker, 1987). For these studies, techniques involving long bone measurements more varied and special studies are being developed for different populations (Carneiro & al., 2013). Dental development also shows variations between populations as in the development of many skeletal components.

Teeth are less affected by factors such as nutrition and hormonal changes than the bones. Therefore, assessing dental maturity is a reliable indicator of age estimation (Lewis & Garn, 1960; Demirjian & al., 1985; Brickley & McKinley, 2004; Bérgamo & al., 2016). There is also a close relationship between bone and tooth growth (Donni & al., 2018). Dental age is an indicator that determines the biological age by analyzing the growth and development of the teeth. This indi-

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Current studies contribute to the identification of cases and are guiding for subsequent researches. Nevertheless, more research is needed in collaboration with interdisciplinary data. Fundamentally, should be consulted to related fields such as forensic odontology, forensic medicine, forensic anthropology, gynecology and anatomy in these studies.

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