
Editorial

Teeth tell the tale: The expanding role of Forensic Dentistry

Teeth are among the hardest and most durable structures in the human body. Their high resistance to decomposition allows them to withstand extreme conditions such as accidents, criminal activities, burial, and environmental exposure. Each individual's dental pattern is distinct, owing not only to natural variation but also to diverse dental treatments and restorations. This uniqueness makes dentition a valuable tool for personal identification and comparison, provided that ante-mortem dental records are available for reference. Thus forensic dental identification plays a crucial role in cases where traditional methods such as visual recognition or fingerprint analysis are rendered ineffective due to postmortem changes, severe trauma, or the absence of fingerprint records. The field of forensic odontology has a long and rich history, with dental evidence being presented in courts for centuries. Over time, the methods and technologies used in forensic odontology have advanced alongside human scientific and technological development, making it a vital component of modern forensic science.

Age estimation through dental development and wear patterns is another significant contribution of forensic odontology. When estimating a child's or adolescent's age, dental maturity is crucial. The order and quantity of teeth that emerge can be used to estimate an individual's age. In addition to providing additional details about the different phases of mineralization, radiographic techniques can also aid in more precise age estimation. Such assessments are valuable in cases involving undocumented individuals, immigration issues, or criminal investigations where age determination is critical. Forensic odontology also includes other methods for human identification such as bite mark analysis, chelioscopy, Virtual autopsy and Virdentopsy, facial reconstruction, DNA profiling, tongue print analysis, rugae print analysis and advancements in technology, including digital dental databases and computer-assisted analysis, have further enhanced the precision and speed of forensic dental examinations. Collaboration between odontologists, pathologists, and law enforcement agencies is essential for maintaining accuracy and ethical standards in forensic investigations.

Forensic dentistry is an emerging branch of dentistry with a great scope of development. It contributes amazingly in the law and justice to investigate various crime cases by providing reliable and acceptable evidences. Forensic dentistry includes various techniques for identification of humans, for age determination, for determining gender and ethnicity of individual. Due to usefulness of dentistry in forensic science, so there is need to make the dentists aware about the importance of forensic dentistry. Dentists should have appropriate knowledge about the available techniques in forensic dentistry and how these techniques can be useful in identification of individuals and in investigation of cases of abuse. Inclusion of forensic dentistry in undergraduate and postgraduate dental curriculum, organizing CDE programs and workshops could increase awareness and knowledge regarding the application of dentistry in forensic identification and investigation.

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