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Fatal fires: The effects of pre-existing trauma to burned soft tissues and skeletal remains

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The presence of injuries to a body prior to the fire produces a unique burn pattern that alters the normal burn sequence. Wounds compromise the integrity of the skin, subcutaneous fat, muscle, and in some cases, bone. Deeper tissues of the subcutaneous fat split and produce rendered fat, which can sustain the fire. Wounds to the body are classified as penetrating trauma (gunshot wound & sharp force trauma) and broken bones (gunshot wound & blunt force trauma). Penetrating injuries affect the layers of skin, subcutaneous fat, muscle, and sometimes bone; leaving tool marks and fractures. These injuries alter the burn pattern, leaving permanent evidence of the injury. For the extremities, traumatic injuries to bones (fractures) result in limb deformation and shortening along with abnormal burn patterns to the fractured ends. Traumatic injury to the head results in early burning of the wounded site, which induces early heat-related colour changes to the injured bone, and in some cases, traumatic fractures into unburned portions of the skull (cranial base), which remains protected and can be examined at autopsy. Forensic Anthropologists can assist the Medical Examiner in the analysis of burned skeletal elements for the identification of traumatic signatures in bone (entrance wounds, impact sites, and fracture identification). Different wounds and the altered heat-related condition are presented so that the clinician can appreciate the variety of wound types, the thermal changes that occur during the fire, and what is left for the investigators at the fatal fire scene for cranial and postcranial remains of the victim's body.

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A socio-historical analysis of the forensic anthropology in the Brazilian context

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The forensic anthropology is a branch of physical or biological anthropology that arises in the nineteenth century in need of technical and methodological more accurate in identifying criminal skeletons linked to the crime scene as given the circumstances of death in the preparation of the crime scene and positive identification of the individual. In social sciences courses in the country is geared more for the cultural and social research having little field research in biological or forensic giving rise to a shortage of professionals in the humanities themselves dealing with the aspect of research in forensic institutes. The foundation of physical anthropology in Brazil comes through the research were based on analyses craniometric, who were studying the human skull by positive methods such as weight, size and structural shape. However, such analyses were made to corroborate the dominant idea of XIX science that was believed to be those originating in Brazil nearby molds of origin of a social evolution of mankind which followed a linear evolution. In specific goals analyze the historical, social and political process of anthropology (cultural, social and biological) that influence the technical and professional staff of the forensic anthropology in Brazil and as currently this field is currently exercised in the country.

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