
E42 A Nunchaku Strangled Woman: A Case Report

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The goal of this presentation is to provide a multidisciplinary approach to the crime scene and the reconstruction of the facts requested. The time between death and the discovery of the body can make it difficult to understand external injuries correctly.

This presentation will impact the forensic science community by demonstrating a multidisciplinary approach to the crime scene and the reconstruction of the facts, especially when the manner of death is not clear.

This case report concerns a murder by strangling, in which the murderer tried to simulate a domestic accident. The device used was quite unusual, a nunchaku, a traditional weapon common in East Asian countries, consisting of two short wooden clubs connected by a chain or rope. This weapon usually inflicts blunt force against different parts of the victim's body but, in this case, it was used as an improvised noose placed around the neck of the victim. The macroscopic characteristics of cutaneous compression sulcus, its vital characteristics illustrated by immunohistochemistry, and the discovery of the weapon of which detailed investigations of forensic genetics were performed, confirmed the homicidal occurrence.

A middle-aged man alerted the police and the health emergency service, stating that his wife fell from a ladder a few days before while cleaning and died. The man reported to the police that, in view of his state of shock, he did not have the strength to ask for help before, so he stood next to his wife's corpse for at least two days. At the crime scene, investigators found an overturned armchair in the bedroom and many opened furniture drawers. The prosecutor ordered a detailed crime scene investigation. The body was laying in a prone position on the floor, near a metal ladder, in an advanced stage of putrefaction; however, a transverse, complete cutaneous compression sulcus, presenting multiple rectangular excoriations along its course, was observed around the neck. No evident cranio-facial injuries were detected. The apartment was thoroughly searched. During this operation, a homemade broken nunchaku was found, with hairs on it. The prosecutor requested an autopsy to determine the manner and cause of death. A postmortem Computed Tomography (CT) scan was performed. Bone and visceral injuries were excluded. The autopsy exhibited mild pulmonary edema, as well as the presence of white foam in the main airways. The histological examination of skin specimens taken from the ligature mark revealed intra-epidermal mild erythrocytes reactions and musculature alteration such as "Zenker's necrosis." In addition, the immunohistochemical staining method on skin samples was performed utilizing anti-tryptase antibodies, IL15 and CD15, which confirmed the vitality of the sulcus. Genetic investigation revealed a match between the DNA extracted from the hairs found on the nunchaku and the DNA of the dead woman. The cause of death was attributed to acute asphyxia due to strangulation by the nunchaku metal chain. The prosecutor interrogated the husband of the deceased, who confessed to the homicide as well as the supposed modality. The husband also confessed that he waited for putrefactive process to mask the signs of strangulation.

It seems evident that a multidisciplinary approach to the crime scene and the reconstruction of the facts should be requested, especially when the manner of death is not clear, or the time between the death and the discovery of the body can make it difficult to understand external injuries correctly.

Nunchaku, Strangulation, Homicide