



Pathology Biology Section – 2010

G102 An Unusual Case of Homicide by Knife, Screwdriver, and a Kitchen Fork

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After attending this presentation, attendees will be familiar with wound patterns inflicted by multiple unusual means. Only a few cases of homicide by screwdriver, knife, and kitchen fork are reported in forensic literature. Sometimes it may be difficult for the forensic pathologist to identify the penetrating weapon missing from the crime scene. The importance of a thorough forensic investigation, including crime scene evaluation, analysis of circumstantial data, autopsy findings, toxicological analysis, histological, and immunohistochemical studies is emphasized.

This presentation will impact the forensic science community by presenting a homicide where the murderer assaulted the victim with a screwdriver, a knife, and a kitchen fork. The unusual injuring tools and the relevant injuries were studied and analyzed to approach the case. The confocal microscope was utilized to verify the three dimensional appearance of the cutaneous lesions.

Injuries caused by sharp or pointed objects are common. They rarely cause fatal injuries; however, and the fatality rate is estimated to be 3% at most. Most fatalities caused by sharp force are homicides. The ratio of homicide to suicide is estimated at 6:1 to 5:2. When investigating deaths owing to sharp force, the forensic pathologist is expected to give an opinion on the following points: the type of injuries; the number and anatomical distribution of injuries; the shape, size, length, and depth of injuries; the object (weapon) used; the amount of force needed to inflict the injuries; the extent of internal injuries; the cause of death; and the victim's capability to act. These points are of

decisive importance for the reconstruction of the sequence of events. Most homicides by sharp force are committed by males, often under the influence of alcohol. The most common tool used is a knife, but other pointed objects, such as scissors, ice picks, forks, or broken glass, may also be used. The victims are usually family members or acquaintances. The death scene is most frequently the victim's home. Fatal stabs are usually located in the precordial or cervical region. The number of stabs does not allow the drawing of conclusions as to the mode of death, the motive, or sex of the perpetrator. When the number of stabs is higher than necessary to kill the victim, this is referred to as "overkill," and may point to a strong emotional conflict between the perpetrator and the victim.

Case Report: The lifeless body of a 18-year-old girl was found in a mansard by the owner. He was giving hospitality to a friend since three months. The girl was the former girlfriend of his guest. The body laid face down in a large pool of blood. Immediately he tried to help her and called the ambulance, but she was pronounced dead. There was a great confusion in the room, on the floor beneath the body a large pool of blood was evident, with extensive blood spatter on the surface of the wall on the right, of the cupboard on the left and of the bed, in the center of the room. The head of the decedent lied near a chest of drawers which surface was full of stripes of blood made by the girl's fingers in an attempt to getting up from the floor. The postmortem examination showed the face devastated by very numerous cross lesion of the cutis, 0.4 cm in length, ending in deep incision on the bone surface underneath. The same wounds were also on the thorax and on the dorsal face of the hands. These wound appeared similar to the shape of a phillips screwdriver tip. On the left side of the face and neck there were many linear wound that appeared always paired and of the same length, suggesting the use of a sharp and pointed object like scissors, kitchen fork, etc. There were also numerous deep linear cutaneous wound on the anterior surface of the neck, slightly oblique, with clear-cut divergent margins, exposing the underlying structures, also sectioned, and ending in linear superficial incisions at different vertebral bodies of the cervical spine. Other deep linear cutaneous wounds were localized on the right emithorax; beneath these lesions the costal cartilage was sharply sectioned at many levels, with soft tissue bleeding underneath. No pulmonary lesions were found. On the hands and the forearm the girl showed many defense lesions made by the sharp and pointed object, and by a cross-tipped mean. Immunohistochemical studies were performed on the cutaneous specimens for the determination of the vitality. The evaluation of skin samples with confocal microscope allowed researchers to observe the three-dimensional model of the different wounds. Toxicological analyzes were negative. On the basis of the autopsy results, the pathologists gave indications to policemen about possible responsible weapons. A thorough investigation of the crime scene allowed the finding of a phillips screwdriver dried with blood and a kitchen fork in a drawer; no other weapons were found. The day after the body finding, the boyfriend, who was sought by police, crashed with his car while he was escaping along the highway. Inside his car police discovered a knife, stained with blood, and locks of hair.

Knife, Screwdriver, Fork