

H45 The Lethal Attack of Cane Corso Dogs: A Multidisciplinary Approach to Solve the Puzzle

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After attending this presentation, attendees will be aware of the importance of a multidisciplinary approach to resolve court cases in which it is difficult to understand the unfolding of events.

This presentation will affect the forensic science community by demonstrating how a multidisciplinary approach was fundamental in establishing the cause of death of a man attacked by Cane Corso dogs. Moreover, this presentation will emphasize the importance of interaction between different forensic professionals, such as pathologists, veterinarians, geneticists, toxicologists, and odontologists.

The Cane Corso is a large and muscular Molosser breed of dog. Males stand 25.0 to 27.5 inches and females 23.5 to 26.0 inches at the withers. Weight is in keeping with the stature, ranging from 90 to 120 pounds. It is believed to be the descendant of a breed of warfare dogs used by the Romans as auxiliaries in the Legions. This ancient Italian breed of dog is usually trained as a guard and hunting dog.

In October 2015 at 8:00 p.m., a 61-year-old man was found dead in a farm orchard located near Sant' Angelo in Formis (Caserta, southern Italy). The corpse was face up (supine position) in a pool of partially dried blood, near an olive tree. He had died 4-6 hours earlier. His face, arms, legs, and abdomen exhibited signs of severe contusions and lacerations from dog bite wounds. He wore socks and shoes, as well as shreds of a sweater, shirt, and undershirt. His trousers were buttoned but pulled down to the ankles. Other shredded clothing was scattered for a range of two meters. All of his clothes exhibited dog bite marks. An overturned basket of olives was found near the tree. A police officer told the forensic expert he had seen a black dog moving away from the corpse and disappearing through a hole in the wire fence. The forensic expert took a sample of blood from the dog's lower lip. Initially, it was assumed that the dog (labeled as dog 1) had attacked the victim while he was picking olives from his trees. Subsequently, during the on-the-spot investigation, five more Cane Corso dogs were located in the area surrounding the crime scene. They were labeled with numbers 2 through 6 and placed in a kennel for further investigation.

The autopsy revealed traumatic wounds caused by several dog bites. The victim's death was due to a hemorrhagic and traumatic shock caused by Molosser dog bite wounds. The lethal bites were discriminated from non-lethal bites and from postmortem lacerations. The dental arches undoubtedly matched those of a dog. With the help of an odontologist, the medical examiner sampled three of the lethal cutaneous arches and fixed them in a formaldehyde/acetic-acid/ethanol solution. A multiple comparison was conducted between the victim's cutaneous arches, the bitemarks on the clothes, and the six dogs' dental impressions¹⁻⁴. Comparisons revealed matches for dog 1 and dog 2.

Several spots on the corpse around the bites were swabbed while cloth samples were taken to perform a genetic analysis.^{5,6} The sample taken from the dog 1's lip was the victim's blood. The genetic profiles of dog 2 and of another dog that was not in the kennel were found on the victim's trousers.

The medical examiner sampled only blood specimens for toxicological analysis because the bladder was empty. Gas Chromatography/Mass Spectrometry (GC/MS) analysis was negative.

The histopathologist analyzed fragments of the victim's heart and found that he suffered from coronary artery disease, congestive heart failure, and minor bleeding events of the epicardium. The histological analysis confirmed the vitality of several lesions, suggesting that the man was still alive before the attack.

A multidisciplinary approach was necessary to solve the case. It was determined that the victim's death was due to a hemorrhagic and traumatic shock caused by Molosser dog bite wounds. Moreover, in cases of traumatic death in which animals are directly involved, the collaboration of different forensic professionals is very important. Finally, forensic veterinary medicine has now become an indispensable branch of forensic science in such cases.

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Forensic Science, Dog Bites, Canine DNA Profiling

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