



D3 One Murder Case: Advantages of a Holistic Approach in Forensic Science

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After attending this presentation, attendees will understand the extreme importance of a multidisciplinary approach to ensure the resolution of a crime of this nature. In this case, a murder crime in which, several areas of research were required, even some that are not commonly applied in this type of investigation, and we will demonstrate clearly that this multidisciplinary approach was crucial to solve the crime.

This presentation will impact the forensic science community by highlighting the importance of a holistic approach that should be used in crime investigations, which is reflected in a multidisciplinary method. With this presentation, the forensic science community will be able to understand the extreme importance of each area of expertise that relates to criminal investigation and leads to the excellence of police work.

Usually, thanatology, biology, and dactyloscopy are forensics areas most commonly requested during a murder investigation. In this case, the reported murder is an example of several disciplines, even those that usually have not been requested for this type of investigation, were crucial for the murder resolution.

On July 10, 2005, in Setúbal District, Portugal (approximately 20 kilometers from the country capital, Lisbon), after a fire extinction in a tree zone used for garbage disposal, the presence of a corpse was detected. This corpse was of a burned and unidentified-male, with no signs of tattoos or any articles that would allow a positive identification. The corpse was gagged with the hands tied behind his back, and after preliminary examination, presented signs of beating. Due to the lack of sufficient identification and interpretation elements, it was necessary to expand the forensic science investigation into areas not commonly used. The use of thanatology, forensic anthropology, lofoscopy, and forensic chemistry for corpse identification was necessary.

About two months later, the corpse remained unidentified. In this period, a vehicle with blood stains was delivered to Judicial Police (Lisbon headquarters), and after collection of blood samples from the corpse (stored in National Institute of Legal Medicine – Lisbon headquarters) and investigation by the Department of Forensics Biology from the Laboratory of Scientific Police, a DNA profile match was obtained.

The corpse was identified as Mr. X, a 71-year-old male individual. The vehicle was purchased during an illicit sale including fake signature (sale contract). Evaluation of the contract was requested and performed at the Department of Handwriting from the Laboratory of Scientific Police.

At this time, the investigators had the victim's identity and, after studying the murderer(s)' profile(s), it was necessary to identify the perpetrators.

After collaboration with the crime scene team of Judicial Police, a home search in the residence of the main suspect, established it was the place where the murder had been committed with help of another individual. Information regarding the exact places where the victim was tortured and murdered as well as the place where the body was placed during two days, the artifacts used during beating, and relocation (covering, transportation, and destruction by fire) of the corpse was obtained. The murderers were sentenced to 18 and 25 years respectively.

Holistic Approach, Murder, Forensic Science