



D68 Misinterpretation and Inconclusive Medicolegal Evaluation Due to False Evidence Obtained From Non-Expert Crime Scene Investigations

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After attending this presentation, attendees will understand a criminal case in which a crime scene analysis, carried out by investigators without specific knowledge of the potentials offered by forensic botany, contributed to the loss of major probatory elements.

This presentation will impact the forensic science community by exposing the lack of a quality control system at crime scenes and to start a debate about the need to train specialists to ensure complete accuracy at the crime scene.

The dead body of a young woman was found on the sofa in her house in May 2012. Considering the lack of traumatic lesions, sudden death or death due to illicit drugs was hypothesized.

After a brief crime scene investigation, the body was transported to the Section of Legal Medicine for autopsy.

Death occurred due to heroin and cocaine overdose, as the toxicological analysis demonstrated. On the subjects clothes and inside the oral vestibule, the examiners found some botanical materials, identified by the botanical laboratory as dried flowers and perulae of *Laurus nobilis* and as ovary of *Wisteria sinensis*.^{1,2} This evidence, along with some small nasal and forehead contusive lesions, suggested a fall in the external environment and successive shifting of the body by another person. Since the transfer of illicit drugs and death following another crime are two separate offenses in Italy, in overdose cases this behavior is often carried out to disguise the crime.

Therefore, a second crime scene analysis was performed. Examination of the garden revealed the presence of a *Laurus nobilis* and *Wisteria sinensis* trees and that the porch pavement was covered in flowers and fruits of these species (association between the victim and the scene).

Police officers stated that other clues, such as the woman's mobile phone, a beer bottle on the porch, and the strange position of the woman's body on the sofa (the body was covered by a blanket but her T-shirt was partially raised) indicated a secondary shifting.

However, they reported that the sheet used by undertakers to wrap the body was previously placed on the porch pavement. The highly probable contamination by plant remains occurred during such operation made the evidence collected on the body almost useless, as it could not be discriminated from the successive contamination. Thus, highly informative elements could not be taken into account.

This case is a serious example of how essential probatory elements can be damaged by non-properly trained investigators, lacking specific knowledge of the potentialities of various forensic sciences.

Although over the last century the forensic science community focused its attention especially on technological innovations, quality control systems, and accreditation of forensic laboratories, in recent years there is more interest in crime scene investigation as the pivot of the entire forensic examination and detective work.

Crime scene analysis is crucial to shelter the scene and to examine, assess, interpret, record, and collect physical evidence for court purposes, but also to direct the subsequent investigations, to establish priorities, and allocation of human and economic resources.^{3,4}

Therefore, crime scene investigation can be considered a central part of forensic science, although not truly scientific, and not simply a technical discipline.^{5,6}

However, in spite of the elaboration of a great number of procedural protocols, aimed at unifying the operative procedures and guaranteeing an objective approach to the scene, crime scene investigations are still far from a standardized quality control system and from a uniform organization (both in different countries and in the same one). Furthermore, performance indicators show an absolute link between outcomes and the knowledge and awareness of each investigator (the examiners tend to see only what they know).⁷ For this reason, it seems to be necessary to establish minimal requirements for those attending the crime scene and to set up a new organizational model with a qualified person in charge.⁴ This individual requires vast knowledge of the potentialities and limits of various forensic sciences and he/she must be able to carry out a correct and precise triage of the crime scene to identify its complexity and to possibly request the help of forensic specialists to ensure maximum quality in the gathering of evidence and in chain of custody.

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