

### **H41 Burns, a Home Fire, Strangulation, Intoxication, a Knife, and Three Cadavers: A Criminal Novel**

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After attending this presentation, attendees will understand the deductive path of a forensic pathologist during the various stages of the investigation of a complex criminal case, from the scene to the autopsy, including multiple suspicions and evidence that should be analyzed, interpreted, and selected across the process of investigation, until the clarification of the final puzzle. The need for a good basic medicolegal preparation in all different areas of forensic pathology is emphasized, so the forensic pathologist is able to interpret properly the features observed, both at the scene and at the autopsy, integrating them all in order to arrive at a definite and correct diagnosis.

This presentation will impact the forensic science community by drawing attention to the importance of the scene examination and the presence of the forensic pathologist, who can offer extra skills concerning the examination of the victim's body on the scene, later confirmed or contradicted at the autopsy.

The fire department of a small city in Portugal was called to put out a fire at a young couple's apartment. At the scene, the firemen found two apparently charred bodies (female and male) and a dead cat; they called the police and the medical examiner, who later autopsied the bodies.

This study analyzes the steps followed in the investigation of this scene: (1) burns and/or charring of a victim (the wife) with a knife nearby; (2) hanging of the other victim (the husband), who was suspended from the stair handrail with an incised wound on the wrist; (3) the furniture in disarray, covered with a veil of black soot; and, (4) chemicals possibly used to start the fire found inside plastic containers in the living room and garage.

The autopsies were ruled necessary to clarify this complicated scene. The burns of the woman presented postmortem characteristic and she did not inhale the fire. In addition, she exhibited lesions compatible with manual strangulation and no cut marks. The knife was used by the husband to try to commit suicide, without success. Finally, he was found hanged, having ingested a blue toxic liquid that was recovered from his stomach (yet another unsuccessful suicide attempt).

It was concluded that both the presence of the forensic pathologist at the scene and the integration of all the information gathered, together with the autopsy findings, were indispensable to clearly understand this crime. The autopsies of the two victims provided explanations for nearly all the questions that arose during the scene investigation. The toxin ingested by the husband couldn't be identified; the cause of the cat's death was not investigated, even though carbon monoxide intoxication is the most likely explanation.

#### **Manual Strangulation, Hanging, Scene Investigation**