Forensic Pathology: from scene investigation to certification of death

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Scene investigation

- Not all death scenes are crime scenes
- Investigation of a scene is similar to evaluating a living person, autopsy, gross specimen or histology slide
- Need to observe details, record findings, develop a hypothesis or differential diagnosis

Scene investigation

- Determine if further studies or investigation is required
- Reflects the osteopathic philosophy: lifestyle, drug use, alcohol abuse
Scene investigation: physical evidence

- Can determine if a crime has occurred
- Can place the suspect in contact with the victim or crime scene
- Can corroborate or refute a victim or suspect's testimony

Scene investigation: physical evidence

- Judges, attorneys, and jurors expect to have physical evidence presented: CSI effect
- Physical evidence is usually more reliable than eyewitness testimony
- Some examples of physical evidence: suicide notes, blood spatter, fingerprints, etc.

Scene investigation: details

- Are there signs of forced entry?
- Are the doors/windows open, closed, locked?
- Are the shades or blinds open or closed?
- Are there any odors? Smoke, perfume, natural gas, decomposition smells
Scene investigation - details

- Are there dirty dishes in the sink?
- Are there empty liquor bottles or drug paraphernalia?
- Rx drugs: expiration dates, when was is prescribed? How many pills or capsules remain?
- CHECK THE TRASHCANS!

Scene investigation - details

- Are there signs of a struggle?
- Is the air conditioning or heat on?
- Check the temperature of the residence
- Are there living or dead animals in the residence?

Scene investigation - details

- Where is the location of the body? Is it near a window or door? Is it near a source of air conditioning or heat?
- The presence of livor mortis, rigor mortis, algor mortis
- Are insects present? What type?
- Any information at the scene that would confirm the decedent’s identity? Legal documents? Medical or physician information?
Autopsy

- A type of “mini” scene
- Similar concepts apply
- Observe, document findings, gather evidence
- Develop a hypothesis or differential diagnosis

Autopsy

- Determine if additional studies are required such as toxicology, histology, DNA analysis
- Help identify the body: tattoos, scars, surgical implants or hardware
- A negative autopsy can pose unique questions and challenges that may only be resolved by evaluation of the scene, interviews with witnesses or review of medical history: e.g., environmental hypoxia due to displaced oxygen

Determination of cause and manner of death

- Scene investigation
- Autopsy findings
- Laboratory findings: toxicology
- Review of pertinent records
Cause of Death

Any injury or disease that produces a physiological derangement in the body that results in the individual dying.

MANNER OF DEATH

How the cause of death came into being.

Manner of Death

- Natural
- Accident
- Suicide
- Homicide
- Undetermined
Natural

- Death caused exclusively by disease

Accident

- Death caused by violent means, not due to the intentional or criminal act by another person

Suicide

- Violent death caused by an act of the decedent with the intent to kill himself
Homicide

- Violent death at the hand of another person due to a hostile or illegal act of that person

Undetermined

- No determination regarding manner can be made after an autopsy and investigation

Questions & Discussion