AUTOPSY

Biomed
Cass Thompson

Autopsy
Describe autopsy use in determining cause and time of death.

- Definition and purpose
- Legal requirements
- Reasons for autopsy
- Preparation
- Procedure
- Results
- Methods to determine time of death
Definition and purpose

• Autopsy or post mortem examination

• A thorough examination of a body after death to help determine:
  – Why (cause of death)
  – How (manner of death)
Legal Requirements

- Pathologist
- Medical examiner
- Coroner

- Define and tell me the difference
Pathologist

• Pathologist:
  – A doctor who has training and expertise in the examination of body tissues and fluids

• Coroner*

• Medical examiner*

• *Government office responsible for investigation deaths that are important to the publics health and welfare
Preparation

• If not required by law, permission needed from the next of kin

• Legal consent form

• Legally what deaths must be reported to and investigated by the medical examiner?
Reasons for autopsy

• Why is it done?
  - injury
  - delayed complications of injuries
  - poisoning
  - infectious complications
  - foul play
  - people who die with no attending physician
Katrina

Autopsies Planned for New Orleans Hospital Bodies

by Robert Siegel

All Things Considered, September 13, 2005 · Autopsies will be conducted on the bodies of 45 patients discovered at Memorial Medical Center in New Orleans two weeks after Hurricane Katrina struck. Officials believe some of the patients may have died as they awaited assistance from emergency agencies. Robert Siegel talks with The Washington Post's Doug Struck.
Procedure

• Complete medical history and review of records, including the events leading to death

HBO Autopsy Site http://www.hbo.com/autopsy/interactive/index.html
External physical exam

• a. Body tag
• b. Weight and height
• c. Clothing and valuables identified
• d. Scars, tattoos, injuries, wounds, bruises recorded
• e. Foreign objects noted
Photos and x-rays taken if needed

JFK
Complete internal exam

• a. Dissection of head and abdomen
• b. Organs removed, weighed, measured and examined
• c. Tissue samples examined under microscope
• d. Fluid samples tested for drugs, infection
After autopsy complete, legal death certificate
Results

- 1. Natural death – disease or old age
- 2. Unnatural death – unnatural, unexpected or unusual cases
Methods to determine time of death

• 1. Traditional indicators
  a. Rigor mortis
  b. Begins three hours after death in face and eyelid muscles
  c. Takes twelve hours to affect entire body
  d. Process reverses after 36 hours
Rigor mortis
An unfortunate victim of suicide. Note that rigor mortis has maintained the position of his arms after the shotgun has been removed. Rigor mortis occurs because metabolic activity continues in the muscle after death.
Lividity (hypostasis)

- Visible 30-60 minutes after death
- Red cells settle and skin below turns red
- In 6-10 hours, color becomes permanent
Body temperature

- Falls at rate of one degree per hour
- Obesity and warm environment slows cooling

Diagram showing how liver temperature, relative to room temperature, determines time of death. Since the temperature of a dead body falls at about one-and-a half degrees per hour, the 87 degree liver temperature indicates death at 6-7 hours before.
• None of the above are totally reliable and can be manipulated

http://www.deathonline.net/what_happens/autopsy/autopsy_steps.cfm

http://www.le.ac.uk/pathology/teach/va/titlpag1.html

http://www.hbo.com/autopsy/baden/qa_5.html

http://www.themokinggun.com/coroner/coroner.html
Lisa McPhearson

• You will be reading the actual autopsy report of Lisa’s death.
• You will complete a cause of death report and note injuries on the diagram.
• The following pictures are of Lisa.
• You will decide if her death was from natural or unnatural causes.
Lividity
• **First released Lisa McPherson Autopsy pictures**
  
  Circuit Judge Bob Barker ruled on Thursday 27 February 1997 that autopsy photographs depicting insect bites on Lisa’s body are public record (Tampa Tribune [28 February 1997](#) - SP Times [28 February 1997](#)).
  
  Forensic entomologists identified over a hundred cockroach feeding sites on her body, and three nationally prominent forensic pathologists opined that the manner of death was "homicide". Pathologist Werner Spitz, M.D. wrote in his affidavit that "the insect bites appearing in the autopsy photographs of Lisa McPherson, and in particular on her hands and feet, are antemortem and peri-mortem/postmortem."

  In other words, bugs were feeding on Lisa before she died, while she was dying and after she had died. Perhaps it is for this reason that they found it necessary to bath a dead Lisa McPherson before they drove her to a hospital 45 minutes away so she could see an emergency room doctor who is a Scientologist, passing four other hospitals.

  And in any case, Scientology argues that postmortem cockroach bites are irrelevant, since Lisa could not personally experience the bites and trauma from it.