



Autopsy Hazards & Negative Autopsy

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Autopsy Room Hazards

- **Mechanical**
- **Biological**
- **Chemical**
- **Electrical**
- **Radiation**

Mechanical Hazards

- **Injuries to limbs**

 - Fractures of lower limbs by fall on wet slippery floor

- **Injuries to hands**

 - Cuts by sharp instruments during dissection

 - Needle prick during closure of the dead body

 - Burns from boiling water and hot instruments

➤ **Injuries to back**

Muscle sprains from carrying of heavy corpse

➤ **Injuries to eyes**

Corneal ulcers by bone dust from sawing of bone

Biological Hazards

➤ **Bacterial Infections**

From septicemic and pyemic
dead body

From purulent fluids in cavity,
abscess or from pus
from organs or viscera

From specific infections

Typhoid and paratyphoid

Tuberculosis
Leprosy
Anthrax

➤ **Viral Infections**

Hepatitis

AIDS

➤ **Fungal Infections**

Chemical Hazards

➤ Antiseptics and Disinfectants

Iodine

Phenols

Dettol

➤ Fixatives

Formaline

Electrical Hazards

- **Electric burns due to faulty appliances, metallic autopsy table and wet floors**

Radiation Hazards

- **Electromagnetic Radiation**
- **Ionizing Radiation from therapeutic radioactive isotopes**

Negative Autopsy

Autopsy which fails to certify cause of death (cause remains unknown or undetermined) is called negative autopsy.

**An autopsy, which fails to reveal a
cause of death with
gross, microscopically, toxicological
ly and other laboratory
investigations.**

Causes of Negative Autopsy

1) Autopsy without adequate history

- Anaphylactic shock
- Pneumothorax
- Vagal inhibition
 - Epilepsy

Causes of Negative Autopsy

- 2) **Lack of Proper Training to Perform an Autopsy Properly**
- 3) **Lapses in external examination**
 - Electrocutation
 - Intracardiac injection
 - Drug addiction
 - Poisonous bites(snake,spider,wasp,scorpion)

Causes of Negative Autopsy

4) Inadequate or improper internal examination

- Air embolism missed
- Pneumothorax missed
 - Coronary spasm
- Distal coronary artery occlusion

Causes of Negative Autopsy

5) Insufficient laboratory examination (Histological, Analytical, Toxicological)

- Faulty or negative results with no contribution for determination of cause of death

6) Obscure or insignificant trauma or disease

- Concussion
- Fat & air embolism
- Delirium tremens
- Polyarteritis nodosa

Causes of Negative Autopsy

- Pathology of SA/AV node and bundle of His
 - Myocarditis

7) Trauma at concealed sites

- Firearm injuries in nostrils, ears, palate
- Atlanto-occipital and atlanto-axial joint dislocation with spinal cord injury

Obscure Autopsy

An autopsy done meticulously, properly and perfectly, but may present no clear-cut findings as to give a definite cause of death, leading to perplexity to the forensic pathologist.

Causes of Obscure Autopsy

The causes of obscure autopsy are usually unexplainable. However, several possibilities are speculated and thought of in a favourable direction to decide the case.

Causes of Obscure Autopsy

1) Natural causes

- Obscure morbid anatomy
- Emotional causes
- Paroxysmal fibrillation

2) Biochemical disturbances

- Uremia
- diabetes

Causes of Obscure Autopsy

- 3) **Concealed trauma**
- 4) **Endocrine disturbances**
- 5) **Poisoning due to;**
 - Anesthetic over dosage
 - Delayed narcotic poisoning
- 6) **Miscellaneous**
 - Putrefied body

Medicolegal Importance

- In autopsies, which are obscure, medical examiner must not hesitate to state that **no opinion can be given regarding the cause of death**
- No doctor should entertain a guesswork in establishing cause of death for the reason that medicolegal autopsy is to exclude foul play and derive justice.

Concealed Trauma

Trauma/injury on concealed parts of the body that may not be obvious.

Concealed Punctured Wounds

➤ **Synonym---pithing**

“Punctured wounds made by inserting pins or needles into concealed parts of the body where they may not be obvious”

These are commonly found in parts such as fontanelle, inner canthus of the eye, up the nostrils, down the throat, nape of the neck, axilla, vagina, rectum, etc.

**These are usually difficult to locate by
naked eye examination and likely to be
missed by the inexperienced autopsy
surgeon.**

They should be looked for carefully especially in cases of infanticide where no other cause of death is obvious.

Death may result if a pin or needle is pushed into the brain through the fontanelle, or inner canthus of the eye, or into the medulla through the nape of the neck.

Pointed instruments may enter into the peritoneal cavity through the vagina during attempts at abortion and may cause death.

Concealed Blunt Trauma

These may be caused by infliction of blunt trauma to the parts of the body such as abdomen, buttocks, back and soles of the feet(Fellenga)where the signs of violence may not be obvious, or in some cases, may be missed or may not be looked for.



**These must be looked for especially in
cases of custodial deaths.**



The End