

Importance of Medico-Legal Autopsy or Clinical Autopsy In forensic science

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In many natural and unnatural death cases, where the cause of death is not certain whether the death was accidental, homicidal, or suicidal in nature then there we need Medical examination i.e. Postmortem examination which become necessary during the crime scene investigation to find the cause and manner of death in cases where victim body was found dead. To perform the medico-legal autopsy the medical examiner not need the permission of the deceased family or relatives. Manner and cause of death can be described by the various examination findings and investigations results performed under the medical officer.

What is autopsy?

The term "Autopsy" is derived from the ancient term word "Autopsia" which means to see for oneself. Both term post-mortem examination and autopsy and used interchangeably. Autopsy is done after the death of the deceased to know the manner, cause of death to establish the identity of the unknown deceased persons found at the scene of crime. Manner of death can be determined only after the various examination procedures and pattern discussed below.

Types of Autopsy in Modern World

- Medico-legal Autopsy
- Pathological Autopsy
- Academic Autopsy
- Obscure Autopsy
- Negative Autopsy
- Digital/Virtual Autopsy

Medico-legal Autopsy is done for the investigation purpose of sudden, suspicious, unnatural or criminal deaths. It can be done only within instruction from legal authority and consent from next-of-kin not mandatory in this type of autopsy. Process of autopsy begins with the inquiry or investigation into cause of death called as **Inquest**.

Types of Inquest

- Police inquest-Held under sec174 CrPc by the IO in the presence of 2 or more respectable persons (Panchas) and he prepared the Panchnama.
- Magistrate inquest-Can be done either by the Executive or Judicial Magistrate under the sec 176(1) CrPc and sec 176(1) (A) CrPc respectively.
- Coroner's inquest- It is practiced in India upon recently so a Coroner is basically a person who is medical professional and has legal qualification. Coroner is a person who basically conducts the investigation, examine the witness, and conduct the autopsy also.
- Procurator Fiscal system-This system was named in Scotland and same as Coroner system.
- Medical Examiner System- This system is the most superior part of examination and is conducted by the medical professional who has a legal qualification.

Scenario in which body is shifted or comes to the Mortuary for the Post- mortem examination

- Medico-legal case (MLC)- In this cases unnatural, suspicious or criminal death cases come and the police magistrate conducts the inquest and then the requisition was handed over to the forensic expert who conduct the medico legal autopsy and then the body handed back to the appropriate authority.
- Non- Medico-legal case (Non MLC)- In his cases natural death cases come in which the treating doctor issue medical certificate of cause of death and then body is shifted to the mortuary for storage if necessary from where body is then handed over to the deceased family relatives
- Brought dead Case-In this cases the body is brought to the emergency room of the hospital and the police conduct the inquest and then handed the body to the forensic expert who conduct the medico legal autopsy and declare the person dead and then the body handed back to the police.

Autopsy protocol

- External examination which include the identification of body, estimation of time since death, examination of clothing, examination of body and documentation of injuries.
- Internal examination can be done with the help of various instruments like skull chisel, scissors, long-handed scalpel Hangedorn needle, enterotome, bone saw. There are three types of incisions which can be done in medico-legal autopsy i.e. I-shaped, Y-shaped, and Modified Y-shaped incisions.

Various methods used in internal examination for the removal of organs are-

1. Virchow Method-One organ at a time.
2. Letulle method- All organs are removed at once.
3. Ghon method-Organs are divided into groups and removed.
4. Rokitansky method-Organs dissected in situ.

Role of Ancillary investigation where cause of death is not certain

This type of investigation includes –

- Histopathological examination in which the body organs are collected and preserved in formalin and then seen under the microscope.

- Toxicological examination in which the specific quantity of viscera is collected, preserved in saturated solution of sodium chloride. The quantity of the biological samples are different like for blood (30ml), Urine(30ml), Half of each kidney, Small intestine and its contents, Liver(200-300g).

CASE STUDY

This is a unnatural death case of the 17yrs old male studying in 12th standard and on 22nd September 2017 at 8:30am standing in the school assembly he had sudden bout of vomiting and he is immediately taken to the hospital and depending on this sign and symptoms doctors declared that it was a case of Phosphide poisoning so on same day he was admitted to the hospital and he dies on 23rd September 2017 i.e. next day at 5:30pm and from then he was brought for the medico-legal autopsy by the concerned police as it was a case of unnatural death and the congestion of stomach mucosa was found to be expected in case of poisoning but doctor find something interesting so the heart in its natural form is covered by the sac wall called pericardium wall and the patient heart was found with blood between the pericardium and the heart and this something which do not generally happens in phosphide poisoning so the body organs was examined histopathologically and medical examiner also sent the viscera for chemical analysis and the histopathological report showing Dissecting aortic aneurysm(type-I DeBaakey) with cardiac tamponade and the chemical analysis report confirmed the presence of Phosphide ions in stomach, small intestine, liver, kidney and blood

On the basis of report cause of death was found due to the acute rupture of dissecting aneurysm of aorta consequent upon poisoning with phosphide ions.