

Relevance of post-mortem and difference between medical post-mortem and medico-legal post-mortem

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ABSTRACT

Forensic science is a sibling branch of Medical practice. The first Forensic lab was established at Calcutta in 1952, which became completely operational in the year 1953. Forensic science is the medico-legal division of the chemical examination. Post-mortem is an important function of forensic and clinical laboratory. The post-mortem is of two kinds clinical or medical post-mortem and forensic post-mortem also known as Autopsy as per medicine laws. Autopsy is derived from a word *autopsia*; a Greek word means 'to see with one's own eyes'. Post-mortem is a mandatory and essential act which should be performed by qualified medical practitioners or by forensic pathologists, by the order of Coroner.

Post-mortem is an essential and crucial phenomenon in the Criminal Justice System, which helps in investigate and examine the traces of any offence, manner and pattern of the death, conclusive cause and ways through which the homicide or manslaughter has been committed. There are several tests and manners to trace different hidden facts and clues related with the death.

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INTRODUCTION

The autopsy or post-mortem is acknowledged as an important and necessary part of medicine. The autopsy represents the examination of dead body in order to determine the cause and manner of death as well as evaluate any illness, disease and injury that may be present at the time of death.

“Medico-legal” term is inclusive of two relative professions i.e. Medicine and Law. Every person talks about law, but very few except lawyers, judges and other legal professionals have true and efficient knowledge about law and order, and others have very ambiguous notion of constitution of law. Generally, a common man has very vague knowledge about law and similarly about medicine. Every person is having unclear and indefinite views about the procedure and system of law and medicine. Medical science was always working parallel to the legal procedure either for the investigation of cases or for the medical examinations of victim or accused or the person suspected.²

Especially in the cases of homicidal deaths or cases of hurt or slaughter causing to human body, the importance and role of forensic science and medicine has increased and usually post mortem/ autopsy is the easiest and most prominent way to find out the cause of death and the patterns of homicidal death.

Post mortem or autopsy is a medical examination of a dead person’s body in order to find out the cause of death.

When an unnatural death has been caused the post mortem examination of the body is an indispensable and crucial mechanism in investigating the apparent and probable cause and manner of death. The autopsy report forms the spine of the case investigation for police. In the judicial matter, an autopsy report with the single unquestionable and conclusive expert statement- ‘the apparent cause of death is suicidal or homicide can be ruled out’ - determine the outcome of a case.

² <https://dir.indiamart.com/impcat/medico-legal-services.html>. last visited 11/02/2020.

In India for every 'unnatural death' autopsy is to be done. It may be suicide, manslaughter, death from an accident like; falling, drowning, unexplained swift death, traffic accident, unidentified body found or death by negligence of a hospital or any other person. The procedure kicks in spontaneously when a person dies.

Though there are no fixed number of post mortem done in India, In the year 2016 a figure was provided by the **National Crime research bureau (NCRB)** for the total number of deaths where criminal cases were registered in 2016, precluding traffic accident casualties: 1,95,006. The accidental deaths have raised the figure from 3, 96,584 in 2017 to 4, 11,824 in 2018. In 2017 it raised from 30.3% to 31.1%.³

“An autopsy is an instrument of medico-legal investigation of death,” says Dr Sudhir Gupta, who is the Forensic department at AIIMS, New Delhi, has excellent forensic facility. “This is not just about cutting a body and filing a report as a formality. But because of the sheer volume, that’s what is happening in most places.”

One of the colleagues of Dr Gupta Mr. Adarsh kumar, a forensic medicine at AIIMS, he said that 80% of these autopsies are performed by doctors who are not at all trained in this field.

“It is for them simply an enforced duty that needs their signature,” he says. Because of this the problems that are created – in terms of delivery of justice, in terms of finding out what really happened to the deceased – are huge. And there are thousands of cases like that, uncountable.⁴

A medical examination of a dead person's body in order to find out the cause of death:

Meaning and definition

1. Meaning

As per the definition of Cambridge dictionary post-mortem/autopsy meaning in English is;

³ Ncrb.gov.in/statpublications/cii/cii2016/pdfs/newpdfs/CrimeinIndia-2016. last visited 11/02/2020.

⁴ http://livemint.com/politics/lofa7q6gweBypR05l0RErO/the_autopsy_report.html . last visited 11/02/2020

- **POST-MORTEM- AMERICAN DICTIONARY**

a medical examination of a dead body to discover the cause of death, or a discussion of an event after it has happened:

The disease or the conclusive cause of death can be confirmed only in a post-mortem.

The word “Post-mortem” is from two words, “post” means “after” and “mortem” is denoting “to life”.

- The forensic post mortem is to be called as *Autopsy*
- The cutting open and examination of a dead body in order to discover the cause of death:

The main purpose of a forensic post mortem is essential to form a backbone for the investigation by police of homicidal death or manslaughter.⁵

The nature of post mortem is both medical and legal. It is a medico legal procedure performed by doctors or forensic experts, to find out the probable cause and pattern of the death of the deceased.

OBJECTIVES OF POST MORTEM

The objectives of the study are as follows;

- To evaluate the purpose of directing the post mortem in homicide cases
- To understand the meaning and concept of medico-legal post mortem
- To understand the meaning of post mortem report
- How post mortem report is relevant in homicidal cases
- How far the post mortem report is pertinent in ascertaining the cause of death
- To understand that how much evidentiary value the post mortem report has and what is its legal significance
- For study of patterns of homicidal death during post mortem.⁶

⁵ Cambridge online dictionary and Collins online dictionary.

⁶ K Mathiran & Amit k Patnaik (lexis nexis 23rd edition 2006 pg. 357,358 New delhi) *Modi's medical jurisprudence and toxicology*

Difference between Medical post mortem and forensic post mortem

In the forensic pathology, post mortem is also known as Autopsy. The purpose of

Performing an autopsy is to ascertain the means and cause of death. Usually in document injuries or any other disease the forensic surgeon performs the autopsy to ascertain the ultimate cause of death. An autopsy maybe done on outer surface of the body or there may be a complete internal examination, which includes the opening and evaluating all three cavities, these are; cranial, thoracic and the abdominal cavity. The anatomic findings and inspection is correlated with other information like microscopic examination of internal organs of homicidal body, toxicological examination, microbiological cultures of tissues, previous medical history, investigators examination result and forensic examinations.

The autopsy is of two types; the medico-legal autopsy and clinical or medical autopsy. A medicolegal autopsy is done to furnish the valuable evidence to the law. In all the nations, autopsy is been performed if the person is dead in some suspicious condition or circumstance, which means the person died without examined or seen by a physician who can attest and confirm that the death is natural, or the person was suspected of having a life taking disease that probably is a threat for public health. In these situations, the state needs an autopsy and they don't need permission from family of deceased person to perform one.

If homicide is suspected in any case, then the autopsy is required for establishing the conclusive cause and pattern of death to determine whether the investigation or findings support the suspected offence, and to give more and more possible evidence about how, when and where that crime might has taken place.

The clinical or medical autopsy is having different goals and motive. The reason to perform a clinical autopsy is quite dissimilar from the purpose of medico-legal autopsy. In the cases of clinical autopsy, physicians are quite confirmed and sure that the death of that person occurred naturally. The pathologists use the autopsy to investigate the details like cause of natural death. Sometimes the pathologists seek some additional and supportive information about the treatment and medical procedures the patient had received, such as internal healing and curing after surgical process or any evidence of reactions or responses occurred due to medication, even if these things are not directly has anything to do with the death. The clinical autopsy also provides researchers studying a disease process such as bone deterioration, and who needs specimens from a patient for whom they have a medical record. Most of the medical post

mortems need the consent and permission of the immediate family of the deceased, which is basically, includes consent for pathologists to take and preserve the organs and specimens of deceased person for the use of medical science.⁷

Post mortem report and its relevance

The post-mortem examination is the systematic investigation of the dead body for clinical and legal purposes. It is the perfect method for founding the cause of death. And the reason of death is well-defined as the main disease or injury was the reason for death.⁸

In general, many people wonder what a post-mortem is and most importantly, why it is important and its significance. Some people are pessimistic to this extent, that they ask if this will help the dead person! Prof Wamukota used to say “the dead make us wiser”.

Post-mortem is thus a medical examination taking place after life has been ended. This examination is also called as an autopsy, which literally means “see it for you”. The term necropsy, the examination of the dead, is the ideal term, though rarely used.

The post-mortem is a means of establishing a conclusive and accurate cause of death, and, by the help of medico-legal autopsy the cause and pattern of the homicidal deaths can be easily discovered. Medico-legal autopsy play a vital role in the investigation of the method, cause and pattern of the homicide. In every homicidal death it is very important for the family and loved ones of the deceased to know the cause and pattern of the homicide. The family of deceased is much at peace if they know that what was responsible for the death of their loved one.

It is relevant to know the process to be complied with by forensic surgeon for medico-legal autopsy. As the primary step, no medico-legal post mortem will perform by the forensic surgeon without an appropriate written requisition from the police officer or district magistrate. It is compulsory that prior to the commencement of the autopsy, forensic surgeon shall cautiously read the police report and must collect information from the police to discover the cause of death. After the completion of the initial process of autopsy, surgeon may start examining the external body of the deceased victim.

⁷ <http://egyankosh.ac.in/bitstream/unit3.pdf>

⁸ <https://www.monitor.co.ug/arts/culture/reviews/what-is-a-postmortem-and-why-it-is-important-//index.html>.
last visited 11/02/2020 .

The post-mortem dunks conflicts and suspicion in the society. The medical post-mortem is also important to trace or reveal the conclusive cause of death in case if there were any disease, it will help in protecting the other family members as there are several diseases which are genetic in nature so if one person dies due to that disease, the other members of that family will take necessary and appropriate measures to avoid chances of getting affected by the disease. The clinical post-mortem also helps in protecting society in case of any infectious disease.

Evidentiary value of Post-mortem report

In a society every person tends to live in a crime-free, safe and sound environment. The main objective or aim of the medico-legal post-mortem is to differentiate between the causes of death. It aims at justice delivery, and protect the society from miscarriage of law and order by separating death due to disease from death due to foul play or any criminal activity, and through this the innocent will be protected from false accusation and the wrongdoer be held responsible.

According to the law forensics, forensic autopsy is performed in below mentioned cases, but not limited to the following cases:

- Suicide or suspected suicide;
- Sudden or unexpected death;
- Doubtful murder or murder;
- Doubts during treatment;
- Death during custody, detention and imprisonment;
- Suspicion of torture or any other form of abuse;
- Unidentified bodies or skeletons
- Deaths associated with police or military.⁹

The post-mortem is one of the basic and primary steps towards the criminal investigation. It is an aid for police to know the actual cause and pattern of the death. Forensic autopsy is a significant medical action with special procedures, technicians and medical practitioners, autopsy can be performed at any stage of the examination of the dead body, and it clarify and verify forensic important facts in investigation of any death.

⁹ <http://egyankosh.ac.in/bitstream/unit3.pdf> last visted 11/02/2020.

The main persistence of the work of the pathologists is to determine the actual cause of death. Pathologist should regulate links between injuries just by watching them to know the cause and ways of death. Once the complete body and completed the autopsy examination, forensic pathologists will come to a decision in determining the ways and cause of death.

According to the Code of Criminal Procedure of the Republic of Kosovo, autopsy can only be done by a qualified legal medical practitioner by the order of state prosecutor. The doctor who has treated deceased person cannot be trusted for the autopsy.

For the proper and efficient investigation of a murder case it is important to know the time of death for creating a source for further investigation. Time of the death provides a direct focus to the suspects of the murder. Like. The last visit of victim before death etc. ¹⁰

The results of post-mortem report may vary as per the time and manner death.

1. Immediate signs of death will resulted and considered:
 - Loss of consciousness;
 - Sensory motor paralysis;
 - Weakening and loss of elasticity of the skin;
 - Prohibition of respiratory and circulatory;
 - Eye signs that are very vital and very dissimilar which forms “time after death”
2. Early signs of death are starting to emerge shortly after the death of the person and it lasts for several days. Until the corpse see spots early, then the possibility of discovery is greater as well as the possibility of determining the type and cause of death is real.

The early dead body signs are:

- Cooling the body which is scientifically known as *Allor mortis*. It occurs due to termination of production of heat, because of prohibition of metabolic functions.
- Stains and marks on the dead body which is scientifically known as *Livor mortis*. These are created due to irruption of the circulation of natural law of force, passive blood flows in the lower body part. It depends upon the position of the death of the body.
- **Solidity** (stiffness) of the dead body which is scientifically known as *Rigor mortis*. It begins to emerge after the death and loss of muscle tone of the body including all muscles of the body.

¹⁰[http://journals.euser.org/files/article/ejis 2016 September- December \(PDF\)](http://journals.euser.org/files/article/ejis%2016%20September-December%20(PDF).pdf). last visited 18/02/2020.

- Drying of the dead body which is scientifically known as *Desiccation*. This happens due to the external factor caused by the evaporation of moisture of body tissues and drying of external parts of the body.
3. **Signs late or stained** those signs indicated that the corpse died after a relatively long period of time, which can be from few days to several months of a year. The incidence of late signs depends upon the distance of time, from ambient atmospheric conditions, type, pattern and manner of death, as well as other factors. The recent signs to the corpse are:
- a. **Decay** scientifically known as *Purtefactio* begins after 24-48 hours after death. Decaying of body is entirely based upon the weather conditions, due to high temperature the decaying process take place faster, whereas when the ambient temperature is cooler decay is delayed and takes place slowly. The decomposition of corpse delay or occurs happen more rapidly if the ambient temperature is between 25-40 degrees, whereas in low temperature decay takes place gradually.

The initial signs of decomposition, observed after 1to2 days, where the first signs emerge on the left side of the abdomen, two days later on the right side of the abdomen, whereas the head after 4-6 days of stay of the dead body without buried. The decay of body takes place in four phases:

- i. Painting of the body, where the dead body turns green
 - ii. Blowing stage, where the internal and external body parts swell too greatly due to the activity of bacteria
 - iii. The stage of liquefaction, where body organs receive the liquid form because of corruption and begins 36-48 hours after death
 - iv. The stage of the carcass body starts after 4-7 days after death means complete liquefaction of delicate organs of the body.
- b. **Saponification** occurs when the corpse lies for a long time in liquid or wet place, clay soil in the cemetery, due to the absence of oxygen.
 - c. **Mummification** is a process takes place at the time when dead bodies are exposed to conflicting currents of hot winds and dryness.
 - d. **Maceration** occurs when troops stay for longer time in the water. When these bodies are taken outside water, their skin separates from the dead body and

remains in the hands of the person who holds a similar body as a garment to be stripped.

All these phenomena of dead body are examined through post-mortem and to know the main cause of death, when, where and how death has been caused all these signs of corpse needs to be examined.¹¹

Conclusion and Suggestions

The post-mortem is a medical examination which is also known as Autopsy, it is the examination of a body after death. The primary motive of a post-mortem is to determine the cause of death. The post-mortem is of two kinds Clinical or medical post-mortem and forensic post-mortem scientifically known as Autopsy. Post-mortems are carried out by legal medical pathologists or forensic practitioners who are specialised in understanding the nature and cause of diseases. It is very important to find the cause and ways of death. In case of a natural death a post-mortem is needed to find whether the death has been caused due to any disease, and in case of unexpected or homicidal case autopsy plays very crucial role for the investigation of the when, how and why someone died. It facilitates pathologists to achieve a better understanding of disease and spreading of infectious diseases.

The post-mortem examination can be done either by the request of A Coroner- if the cause of death is uncertain, unknown or following a sudden, unexpected or violent death (*A Coroner is a judicial officer who is responsible for investigation of deaths in certain situations by the method of Inquest.*) or by a hospital Doctor- to examine if the death caused due to illness and for further medical research and understanding. A post-mortem usually carried out within 2-3 working days of the person's death, but in few cases it is usually done within 24 hours of death. The pathologist writes a report after completion of post-mortem. The Human Tissue Authority (HTA) ensures that the human issue is used safely, ethically and with reasonable consent. HTA regulates organisations that remove, store and utilize tissue for research, medical, public display and teaching.

¹¹[http://journals.euser.org/files/article/ejis_2016_September-December_\(PDF\).last_visited_18/02/2020](http://journals.euser.org/files/article/ejis_2016_September-December_(PDF).last_visited_18/02/2020).

K Mathiran & Amit k Patnaik (lexis nexis 23rd edition 2006 pg. 423-449, chapter-14 New delhi) *Modi's medical jurisprudence and toxicology* .

WHY POST-MORTEM IS NECESSARY AND WHAT IS THE NEED OF POST-MORTEM?

- 1) It helps in establishing the conclusive cause of death.
- 2) It differentiates a natural death due to illness from an uncertain, cruel and unexpected death due to some criminal activity.
- 3) It provides the primary investigation link to police in case of any suspicion.

Similarly there are several reasons to support and encourage the post-mortem examination. It sometimes helps to store, use or study further for medical or research purpose.¹²

¹² *K Mathiram & Amit k. Patnaik. Modi's medical jurisprudence and toxicology(lexis nexis 23rd edition 2006) . last visited 11/02/2020*