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**LEDARES**

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## **THE IMPORTANCE OF PME**

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**CRIME SCENE - DO NOT CROSS CRIME**

■ Slides ■ Doctors notes ■ Additional ■ important

# THE IMPORTANCE OF PME

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## Consent:

- Except forensic Autopsy.
- In all other cases, permission is required, cannot be performed without consent.
- It can be requested either by the **patient's physician (medical autopsy) or by the family (private autopsy)**. Plus forensic autopsy like in criminal law cases.
- - When giving consent, the family may make any restrictions, limitations, or special requests.

Consent is important in everything whether in clinical or postmortem cases; it is the first thing in medical ethics.

## What is PME?

- Postmortem examination of the organs and tissues of a body to determine cause of death or pathological conditions.
- An external and internal examination of the body after death using surgical techniques.
- Performed by a forensic pathologist.
- Takes {2 – 4} hours to perform.

## THE TYPE OF PME

- **May be**
  - Invasive.
  - Mini-invasive. Related to certain organs such as heart mainly and genetics.
  - Non-invasive procedures. Take fluid, do external examinations. Only taking samples from every organ and do histological and pathological examinations.
- **May be**
  - Comprehensive
  - Limited to a particular organ system.

## Small samples of each organ are taken:

- For microscopic examination, (malignancy or infection.....)
- For studying genes.
- For checking for drugs, chemicals, or toxic substances.

## • The performance of an autopsy should not delay a funeral or affect viewing of the body.

- Autopsy ethics
- Autopsy procedure
- Limited
- Minimally invasive
- Virtopsy: “implement imaging modalities from diagnostic radiology and surveying technology in forensic sciences. Such as CT, MRI, optical 3D surface scanning, and 3D photogrammetry”<sup>1</sup>.
- Techniques

## • Sub-specialized PME:

- Molecular autopsy: SUD (sudden unexplained death)

When we do an autopsy 60 % of adult cases can't be determined not even in the microscopic or, so standard autopsy is not enough to determine the cause of death, here we do molecular autopsy. It is good in: - cardiac cases like in sudden cardiac arrests (we take sample from the heart), - good for some adult, - below one year cases like stillbirths (must be done), But not in all cases we do genetics because it is expensive.

- Perinatal : **WHO** (world health orgnaizer) did it because of many Perinatal cases .
- Natural deaths
- Research
- Negative autopsy: no cause found even in molecular autopsy it came out negative.

All these points are in medical autopsy not in forensic.

<sup>1</sup> <http://www.virtopsy.com/about-virtopsy.html>

## Why perform an autopsy?

- The primary reason to perform an autopsy is to **determine cause of death**. (to discover new diseases it benefit the epidemiologist and preventives)
- There are other benefits to individual, families, the practice of medicine (**research**), and the community at large.
- To answer any questions the law, the family or physician may have about the illness, cause of death, and/or any co-existing conditions.
- In addition, there are forensic benefits of investigation of homicide, suspected homicide, other unexplained or suspicious deaths, and deaths apparently due to accident or injury. (**legal issue**)
- The autopsy is important to providing an understanding of the quality of patient care.

## MANNER OF DEATH

- **Homicide.**

(Committed by someone else, the different between homicide and murder is the intention, in the murder there is intention and in the homicide it is not necessary, here we can say that all murders are homicides but not all homicides are murders).

E.g. someone got a gunshot and did not die but he has some complications like seizures, after 30 year he have a seizures, vomit and aspiration then died. (**This is homicide**).

When you write the cause of death in the death certificate, you say "due to..., due to ..., due to ..., until you reach the main cause of death.

- **Accidental.** Such as car accidents.
- **Natural.**
- **Suicide.**
- **Undetermined.**

Not a negative autopsy (there are more than one cause ,we don't know whether it is homicide or suicide (we have evidences in both hands), so here we will let the case open even for 10- 20 years maybe someone or some prisoners confess of committing the crime).

- **Unclassified.** Dr.Theeb said that he will delete this point.

Something new (like some who drinks alcohols by the time he developed liver cirrhosis then he died) (overdose is not unclassified) this point depends on the law.

The doctor said this slide and the one before are the most important (meaning the manner of death and why we do autopsy)

## **How families benefit from the autopsy**

### **● Discovering inherited or familial diseases**

- May help families through early diagnosis and treatment & family planning.

### **Discovering an infectious disease**

- May lead to early diagnosis and treatment & to help other family members and close contacts (TB).

### **Uncovering evidence of a work-related disease**

(Someone force his worker to work for more than 8 hours a day).

- Might lead to compensation for the family.

## **Providing crucial information for the settling of insurance claims or death benefits**

- May result in benefits for the family

### **Confirming a specific cause of death**

(Like if someone had pulmonary embolism then they did PME and found ruptured appendicitis here it is a misdiagnose especially with pregnant women because of the enlarged uterus because it pushes the organs up so the pain becomes near the chest and mimics PE)

- May simply ease the stress of the unknown.

## **Finding that diagnosis and treatment was appropriate**

- May be comforting to the family.

## **Knowledge that information gained by the autopsy**

- May help someone else to live longer may ease the profound sense of loss experienced by families.

## Understand what has happened to their loved one is by performing an autopsy

- Increasing knowledge about causes and course of an illness and effects of different types of treatment. (Many tumors and metastasis to brain and lung were known by donig autopsies)
- Explaining the causes of injuries and accidents involving automobiles, falls, or other situations.  
Providing information about preventable causes of disease and accident and other public health hazards
- Helping to establish the cause and manner of death, which at times may be required by law.
- The autopsy is important to providing an understanding of the quality of patient care.
- To monitor health system.
- Medical education, training and research leading to improved health care.

## Are there religious conflicts?

- YES VS NO

For more information:

<http://www.carnells.com/help-support-article.aspx?id=64>