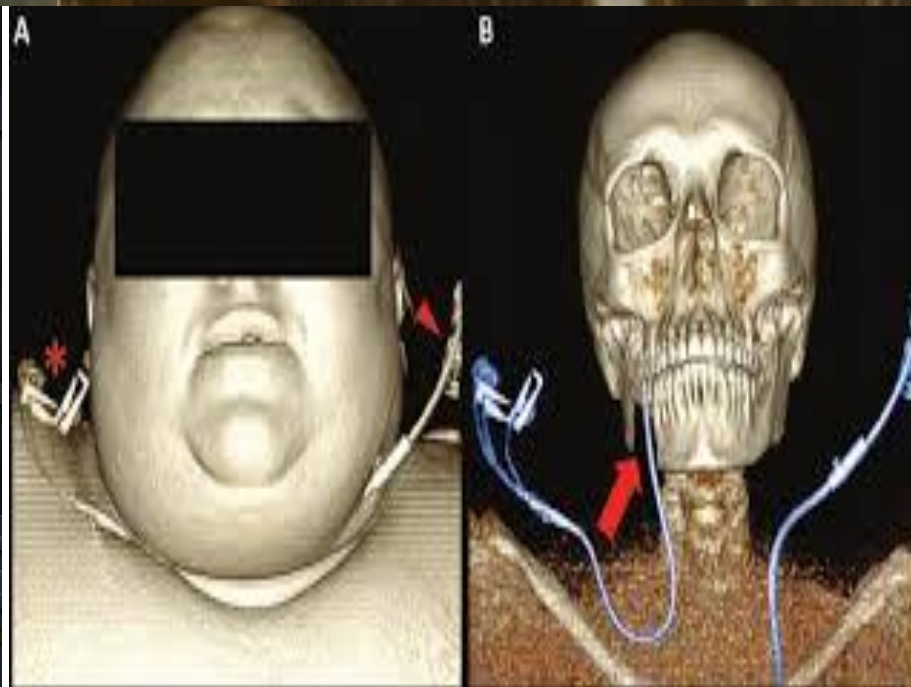


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Learning objectives

- Define Autopsy.
- Describe objectives of Autopsy.
- Describe types of Autopsy.
- Describe different techniques of Autopsy.
- Describe standard Autopsy suite.

AUTOPSY

Synonyms: Post Mortem, Necropsy, Thanatopsy

Autopsy :

Auto --- Self Opis --- view / Examination
(self examination). It may be defined as, The detailed scrutiny of both external surfaces and internal contents of dead body after opening its cavities including further examination, such as histology, biochemistry and toxicology of collected material.

OBJECTIVES OF MEDICOLEGAL AUTOPSY

1. To determine identity of deceased.
2. To establish cause and manner of death,
3. To determine time since death.
4. To identify weapon, person or poison responsible for death.

5. In case of new born infant to determine issue of live or still birth and viability.

6. To restore the body the best possible cosmetic appearance before it is released to the relatives.

AUTOPSY TYPES

1. Medical /clinical/ pathological / hospital autopsy.
2. Medico-legal autopsy
3. Postmortem examination
4. Psychological autopsy
5. Virtual Autopsy

MEDICAL AUTOPSY

Carried on a patient who dies in a hospital during course of treatment.

Objectives:

1. To determine the cause of death.
2. To confirm or establish the clinical diagnosis
3. To evaluate the effects of treatment given during life. Performed by a pathologist with consent of relatives.

Medicolegal Autopsy



MEDICO-LEGAL AUTOPSY

Essential examination of dead body, to rule out or establish foul play in death.

It is performed in pursuance of law to establish the cause and manner of death and also to establish or rule out foul play.

- It is performed by a medico legal expert but due to lack of qualified experts, all authorized medical officers of Govt. can perform it.
- It is performed under section 174 CrPC of Pakistan and police rules 1934 section 25.34 and 25.36.

POSTMORTEM EXAMINATION

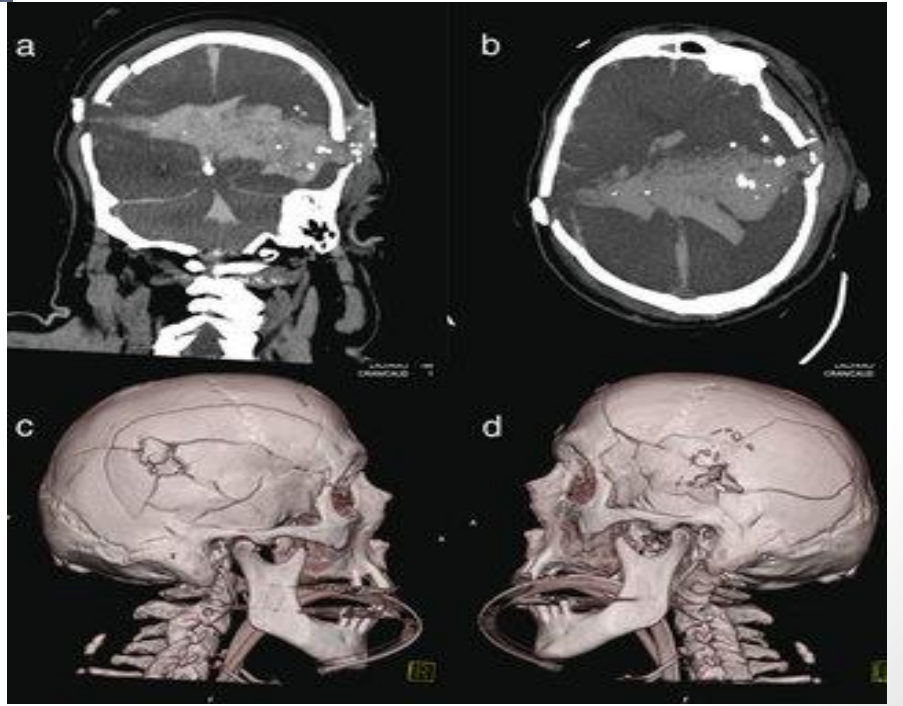
- Examination of external surfaces of corpse by inspection without giving incision for systemic examination.
- However specimen of body fluids like blood, bile and urine may be collected.

PSYCHOLOGICAL AUTOPSY

- It is undertaken on alleged cases of suicide to know about the mental status of deceased at the time of death.
- It should include the background of the person
- his habits ,mental status, personality trait , character and his relation to others.
- Sources of collection of information are Family members, friends, professional colleagues, teachers and physicians, NOT THE POLICE.

VIRTUAL AUTOPSY

- It is a postmortem examination without compromising the integrity of the body, even without collection of sample.
- Due to some reason or disease the autopsy of dead body is not possible. Then by the help of radiological examination, we can detect the cause of death.
- Methods used are X-rays, ultrasound, CT scan and MRI.



AUTOPSY RATE :

It is proportion of autopsies carried out on deaths notified to the authorities.

AUTOPSY INDEX

It is the proportion of medico-legal autopsies carried out on total deaths in a community.

AUTOPSY DISSECTION TECHNIQUES

1. R.Virchow's Technique.
2. C.Rokitansky's Technique
3. M.Letulle's Technique
4. A.Ghon's Technique
5. Evisceration

R.VIRCHOW'S TECHNIQUE

▪

1. In this method organs are removed one by one.
2. First the cranial cavity is exposed & from the back , the spinal cord, followed by the thoracic , cervical and abdominal organs.
3. This method is used most widely.

▪

C.ROKITANSKY'S TECHNIQUE

1. This technique involves in situ dissection in part combined with en block removal.
2. This technique is commonly preferred whenever the pathologist wants to limit the spread of infection such as HIV, Hepatitis B etc.
3. The disadvantage of this method is that the organs can not be studied in detail.

M.LETULLE'S TECHNIQUE

1. In this method thoracic, abdominal & pelvic organs are removed enmass but subsequently dissected as organ block.
2. This technique is best for routine inspection, preservation of connections between organ & organ systems.
3. The organ blocks can then be studied in detail. -

A.GHON'S TECHNIQUE

1. In this method the thoracic, cervical, abdominal organs and the uro genital system are removed as organ blocks.

EVISCERATION

1. The method is removing thoracic & abdominal organ blocks prior to dissection or removing each organ in sequence.
2. The pathologists are most comfortable.
3. Many crucial observations made only during evisceration.
4. All the organs should be weighed and a brief description of the organs should be recorded.



STANDARD AUTOPSY SUITE

- Should consist of autopsy room,
- Storage area for the corpse and material such as chemicals, disinfectants and instruments,
- Offices for the staff,
- Medical record room,
- Waiting area for public and private and public toilets.

- The principle of design of autopsy suite is That the waiting area should be near the entry,
- Corpse entry/exit of autopsy room should be wide, unobstructed and preferably separate from the entry door for public.
- The floor and walls of autopsy room should be impervious preferably bearing ice blue tiles for easy cleaning and washing.

REQUIREMENTS OF AUTOPSY ROOM

- Include plenty of running water,
- Sufficient light, and efficient ventilation,
- Proper arrangements for sterilization, refrigeration and dissection.
- The autopsy room should be kept thoroughly clean, well ventilated and properly illuminated.
- The staff should enter after wearing standard autopsy suits including rubber boots.

AUTOPSY ROOM LIGHT

- Should be natural sunlight, which should preferably come from the north side.
- Alternately daylight-lamp specially made for the purpose should be installed at an appropriate level to obtain sufficient artificial white light.
- In case of non-availability of daylight-lamps ordinary ice-blue fluorescent electric tubes are recommended for the purpose.



- The amount of light should be sufficient to differentiate various shades of skin color due to disease, trauma or putrefaction.
- A minimum of 90 lumens of light at table level is considered sufficient.
- There should be numerous electrical outlets covered with water proof screw caps for use of electrical appliances like electric saw, X-ray illuminator, cameras and video recorders.

AUTOPSY ROOM WASHING

- Should be done thoroughly after every autopsy.
- The water supply should be abundant and should come down from the ceiling.
- The drainage from postmortem tables and the floor should lead first into an open gully before joining the main drain system to prevent blockage.



- The sterilization of autopsy room should be done by ultra violet light.
- After a day work, bacteriological test of walls and floors should be sterile.
- The medical students should not be allowed onto the floor of autopsy room and be seated in the viewing gallery having a separate entry.

Autopsy room ventilation

- Should have reverse.
- Air should enter the room from ceiling and leave through vents in walls near the floor.
- Such arrangements reduce smell and help to prevent transmission of infection by inhalation.
- These vents should have adjustable water proof covers.

MORTUARY REFRIGERATION UNITS

- Are built as two, four or six- body-unit having one single door or multiple small doors for each cabinet.
- The requirements of the mortuary refrigeration unit of any center will vary according to the workload and policy of storing of the corpses.
- For an annual load of 100 corpses, the eight-body-unit is sufficient.



- The pre-autopsy temperature of the corpse requiring microscopic examination of the tissues should not go below $+4^{\circ}$ C, so that freezing of the tissues does not occur.
- The post-autopsy temperature for longer periods should be kept around -20° C or even lower.


DISSECTION ARRANGEMENTS

- Essentially include protective dressing suite, made of water and airproof material.
- Consists of an operating gown, a plastic apron, hood and non-slip rubber boots, which are full length.
- Essential dissecting arrangements are autopsy table, autopsy instruments, suction unit and portable X ray machine.
- A portable X-ray machine is essential to locate fractures and inanimate bodies like bullets.

LIST OF INSTRUMENTS

- Probes (general operators and straight)
- Scissors (large blunt-ended, small pointed-ended, medium blunt and pointed-ended and a pair with one blade having a hook extension for opening of the gut)
- Forceps (blunt end 4" , 6")
- Knives(5" fixed blade, those having detachable blades, operating, amputating, cartilage cutting, and long knives from 12" to 24" blade for cutting of brain)

- Urethral sound (curved and van burin)
- Proctoscope (different size)
- Shears, different types (to cut ribs etc)
- Hand and band saws
- Chisels (small and large)
- Hammers (small and large)
- Post-mortem needles (half curved and cutting edged)
- Sutures (different types)



Jazak Allahu Khair

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you [with] goodness.

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