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MANUAL 2018

Department of Forensic Medicine and Toxicology

Jawaharlal Institute of Post-Graduate Medical Education and Research

Institute of National Importance

Govt. of India

Puducherry, India

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CHAPTER-1

INTRODUCTION

The Medicolegal system of investigation in India involves various agencies like Autopsy Surgeons, Medical Officers, Hospital administration, Police Personnel, public prosecutors and Judiciary. The Mortuary of a hospital where the post mortems are conducted is an important place in the administration of law and justice.

The mortuary is considered as a place of conducting post-mortems only and many aspects of its infrastructure and functioning are not known to all of the stakeholders mentioned above. Keeping in view the above fact, the Manual of the mortuary of Department of Forensic Medicine and Toxicology, Jawaharlal Institute of Postgraduate Medical Education and Research, is prepared. The manual will serve as introductory guide to the administration and infrastructure of Mortuary. The staffing pattern and job responsibilities have been detailed. The procedures and precautions for the safety and hygiene of the Mortuary staff have been mentioned. The requisites, procedures and guidelines in relation to postmortem and other medicolegal examination have been explained. Besides other aspects like medicolegal record keeping, grievance redressal mechanism has been covered in the manual. The manual includes all the recent guidelines and Advisory of Ministry of Health and Family Welfare, Government of Delhi, NHRC etc. regarding Mortuary and Medicolegal Procedures.

The aim of formulating this manual is to give a realistic orientation of the functioning of the Mortuary of Department of Forensic Medicine and Toxicology, Jawaharlal Institute of Postgraduate Medical Education and Research. The manual will act as guide to the newly joined doctors in the Department and various departments of Hospital. It will also increase the understanding of our mortuary procedures and better coordination with various agencies like Police, Judiciary, General public etc. It will help in the smooth functioning of mortuary with clear protocol and guidelines.

CHAPTER-2

INFRASTRUCTURE OF MORTUARY LOCATION

Jawaharlal Institute of Postgraduate Medical Education and Research has a mortuary complex situated in the campus.

INFRASTRUCTURE

The building encompasses four rooms in addition to the a cold chamber room, waiting area, toilets and a post graduate research room . The civil, fire safety, air-conditioning and electrical aspect are maintained by the respective divisions of Engineering Section of JIPMER.

1. Cold Chambers

A total of four cold chamber facility is present for the preservation and storage of the dead bodies that are brought for the medico-legal autopsy and for non MLC cases of which one is walk in cold chamber with capacity of 9 chambers. The other cold storage facilities has 4 chamber each. One of the 4 chamber facility is located in Academic section block. The total capacity is 21 chambers. A trolley bay leads directly from the cold chambers to the autopsy hall. The temperature range is maintained in the range of 3.5°C to 6.5°C.

2. Hearse Van service

The hospital provides the hearse van service for transport of dead bodies from JIPMER campus to the deceased residence for a 50 kilometre radius. This service is provided free of charge by JIPMER.

3. Waiting Area

There is waiting area designated in front of the Mortuary Complex. The waiting area is covered with steel sheds and concrete slab bench for sitting of general public.

4. Morgue Attendant Room

The on-duty morgue attendants with DLR mortuary attendants are present in this room within working hours.

5. Medico-legal Record Room and Mortuary office

This room serves as the hold for all the medico-legal cases dealt in the Mortuary by Doctors of the Department. Two dedicated staff are deputed to maintain MLC records. The subsequent opinion cases are submitted and received by the police from this room. The post mortem reports are also handed over to the Police officers by this section.

Mortuary office deals with day to day activities of Mortuary and functions (9am to 4.30 pm). The two staffs are posted here deal with all the day to day proceedings of the Mortuary, store management and equipment maintenance. The Inquest papers are submitted to the office, after getting them entered into the central registry system. The cases details are noted in the Mortuary register vide a postmortem number.

6. Police waiting hall

A place is designated for the police personnel to complete the necessary documents for inquest proceedings and also serves as a sitting/waiting area till the police receive the body after completion of postmortem.

7. Dissection/Autopsy Hall

Two large room with two tables each having adequate ventilation provided with HEPA Filter System (process of installation) and facility for adequate light is dedicated for autopsy. The autopsy hall is under complete renovation to give way to an odourless modular autopsy suite.

8. Clinical Forensic Examination Room

The cases relating to Clinical Forensic Medicine like examination of accused in sexual assaults, injury examination, and sample preservation for DNA test are conducted in this particular area.

9. Doctor Room

The room is used by the doctors of the department and has computers with internet facility for report typing. Postmortem report is issued in computerized format.

Equipments and Instruments

Some major equipments and instruments present in the Mortuary for autopsy procedure are:

1. Cold Chambers
2. Postmortem tables-4
3. Surgical operating Lights-3
4. Grossing Station
5. UV Lights chamber
6. Hepa Filter System for each autopsy room
7. Dissection Instruments Boxes
8. Electric Autopsy Saw
9. Body weighing machine
10 Digital weighing machine
11. Computers with printers
12. Instrument trays
13. Instrument trolleys
14. Dissection boards.

CHAPTER-3

STAFFING PATTERN AND JOB RESPOM5IBILITY

The staffing of the JIPMER Mortuary is as follows with a brief Job responsibility of every officer.

Faculty Members

There are five regular faculty members working in the Department of Forensic Medicine and Toxicology. Every day one faculty acts as Consultant on duty for Postmortem and Medicolegal work. The faculty and residents conduct the medico legal work and remain available for consultation on their duty day.

Senior Residents

The senior residents also put on roster along with the consultants and they handle the medico legal works.

Junior Residents

For each day three Junior Residents are put on duty roster. They work with the faculties and senior residents and carry on the day to day medico legal works. The Investigating Officer reports to the resident doctors and faculty / senior resident on duty for postmortem or medicolegal examination who then proceed according to the guidelines and procedures detailed in **subsequent chapters.**

MLC wing clerk and mortuary MTS Worker

There is one MLC wing clerk posted in the mortuary. His job responsibilities are:

1. To make entry of cases for post-mortem in the PM register.
2. To assist medico legal record work of the post-mortem.
3. To maintain the PM records.
4. To maintain all the files and records pertaining to mortuary.
5. To ensure the availability of daily usage items through Hospital or Departmental store.
7. To supervise and monitor the work of Morgue attendants.
7. To coordinate and keep liaison with the engineering departments for any problems.

Morgue Messengers

A total of three morgue Messengers are present and are under the control of reception (under the supervision of the Medical superintendent).

One morgue attendant (messenger) is posted in general duty hours. Their job responsibilities are:

1. To keep the bodies in relation to medico legal case death occurred in hospital receive and hand over the body to the police in MLC cases and to the relatives.
2. To ensure the proper identification of the body and the recipient, both at the time of receiving and handing over of the body.
3. To ensure swift transportation of the bodies from the hospital to the mortuary.
4. To properly preserve the body in the cold chamber and maintain the respect and the dignity of the dead.
5. To keep the cold chambers under lock and key.
6. To help maintain the record of bodies coming to the Mortuary in the register (maintained by the reception).
7. To monitor the temperature of the cold chambers and their upkeep.

Mortuary attenders

1. To assist the autopsy surgeon in the postmortem examination, preservation of viscera, labelling etc.
2. To maintain the disinfection of the autopsy instruments.

Mortuary DLR Staff

1. To assist mortuary attenders
2. To ensure the cleaning of autopsy room.
3. To ensure the disinfection of the autopsy room hall by weekly washing, etc.
4. To assist the Mortuary Technician in his duties.
5. To maintain cleanliness and hygiene in mortuary.
6. To assist and follow the instructions of the morgue attendants and Mortuary technician in handling and shifting of dead bodies.

Sanitary Attendants

Appointed by the hospital administration

1. To ensure the cleaning of mortuary complex.
2. To assist in the disinfection of the autopsy room hall by weekly washing, fumigation etc.

Security

Security guards are present round the clock in Mortuary. They are posted by the Security agencies outsourced for providing security at JIPMER.

Chapter 4

GUIDELINES FOR PRESERVATION, TRANSPORTATION AND HANDLING OF BODIES CATEGORY OF BODIES PRESERVED

The Department of Forensic Medicine and Toxicology preserves the following dead bodies, as per approved guidelines by JIPMER Administration:

1. The MLC deaths of patients of other state/districts dying in JIPMER during treatment.
2. Non-MLC deaths of patients dying in JIPMER during treatment (on request by the deceased relatives).
3. Brought dead patients belonging to union territory of Puducherry and other neighbouring States
4. Dead bodies brought/ referred for medico legal autopsies from within the union territory or neighbouring states
5. Due to limited capacity in the cold chambers, Non-MLC deaths other than those dying in the hospital will be preserved only after considering the available space in cold chambers, rationale and need of the relatives.

Custody of MLC Bodies

As per the law of land, the custodian of dead bodies in all unnatural deaths where further legal investigations are required, is the jurisdictional police. The hospital acts as a facilitator for preserving the dead bodies till police investigations are going on. The custody and identification of body directly lies with the Police without any third party intervention. The treating doctors authorise the preservation of MLC dead bodies in mortuary cabinets.

Preservation of MLC Dead Bodies Dying Outside JIPMER

1. The police personnel depositing the body must ensure that tag/ Label indicating the name of police post with FIR/DD number has been put on the dead body by the police for purposes of identification.
2. No dead body will be received and stored in the cold storage without any identity tags/labels.
3. The permission for preservation of the body has to be taken from the Medical Superintendent / Deputy Medical superintendent by a formal letter **(Annexure).**
4. In case of unknown bodies, the police should get the postmortem examination conducted as soon as possible since the mortuary has no legal obligations to keep the cadaver after 72 hours and also to avoid decomposition changes which may hinder the determination of identity, cause & manner of death as well as to avoid indignity to human corpse.

Procedure for Release of Dead Bodies of Patients (MLC) Dying In JIPMER

In a MLC case, death occurring in any of the clinical areas viz. inpatient wards/ICU/Emergency, the dead body will be mandatorily sent to the mortuary, and subsequently release of the body depends on the request of the investigating officer.

Transport of Dead Body from Hospital to Mortuary

1. After death the body should be properly labelled mentioning the Name, Father's name, admission number, ward, date & time of death etc., by nursing staff on duty.
2. In addition, in Medico-legal Cases, the letters 'M.L.C should be put on the label prominently.
3. Nursing staff on duty in the ward should insure that surgical operation/drainage site if any is properly dressed before the body is wrapped in leak-proof sheets/plastic bag before it is handed over to next of kin or mortuary attendant.
4. The Mortuary Attendant (messenger) on duty is informed that a pick up or removal is necessary from the wards.
5. The hearse van service if necessary is provided free of cost for transportation of the body from the hospital to the Mortuary.
6. The Morgue attendant (Messenger) will place the body duly wrapped and labeled bodies in a courteous, sensitive and professional manner, along with the relevant records including death slip.

Intake Procedures and Release of the Dead Body for Autopsy

The treating doctors authorise the preservation of MLC dead bodies in mortuary cabinets. Once the police gives a request for autopsy the office clerk in consultation with the duty doctor will inform the reception (under the control of Medical Superintendent) for the release of the body to the Police for further procedures.

Guidelines for the Storage of Dead Body

1. The bodies are stored in cold chambers at a temperature of 3.5 to 6.5 degree Celsius.
2. It is made sure that there is no access for rodents/pests into the body storage area.
3. Body storage area is kept clean and free from any such matter which may attract rodents/pests. The body is not to be placed on the floor or otherwise kept carelessly.
4. There is power back-up round the clock.

5. The cold storage room/cabinet is kept under key and lock by the on duty morgue Attendant (messenger / Reception).
6. The opening of cold storage and releasing of body is only permitted by authorized person.
7. It should not be treated in a way that might hurt the sentiments of the next of kin.
8. The morgue attendant (Messenger) will match the tag of the dead body with details of the death slip.
9. The identification of the dead body by relatives will be insured by the morgue attendant (messenger).
10. Special precaution must be taken when two stored bodies having identical features like, same name, age, sex and physical appearances.
11. In case of any exchange of dead bodies, the incidence must be reported to officer in-charge mortuary/ head of hospital /head of the department /local police immediately and action must be initiated for correction. The detailed report must be kept in record.

CHAPTER-5

SAFETY AND HYGIENE

Universal Precautions

According to the concept of universal precautions, all human blood and human blood components, and Other Potentially Infectious Material (OPIM) are treated and handled as if known to be infectious for HIV, HBV and other blood borne pathogens. OPIM includes the following human blood, body fluids like semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, anybody fluid that is visibly contaminated with blood and all body fluids in situations where it is difficult or impossible to differentiate between body fluids.

The following protective measures are followed and practiced in JIPMER, Mortuary as per Universal Precautions:

1. Personal Protective Equipment
2. The doctors and staff of the Mortuary should use Personal Protective Equipment (PPE) to prevent skin and mucous membrane contact with blood and OPIM. These include the use of gloves, masks, protective eye wear, shoe covers, plastic aprons/gowns with full sleeves hair bonnets, cut resistant gloves, laboratory coats etc. Additional PPE may be required depending on the particular case circumstances.
3. Handwashing - Hands shall be washed each time gloves or PPE are removed. Hands and other skin surfaces shall be washed with soap and water immediately after contact with blood or OPIM. After washing the hands/skin surface should be disinfected by sanitizers.
4. The sharp objects, such as bones, broken glass, metal, knives, etc to be handled with care.
5. Make sure any wounds, cuts and abrasions, are covered with waterproof bandages or dressings.
6. Do not touch your eyes, mouth or nose.
7. Refrain from handling personal items, such as pens and combs, to prevent soiling or contamination
8. The two autopsy rooms are provided with HEPA filter system to prevent aerosol contamination in the autopsy room during post mortem examination

Disinfection and Sanitation

1. Sanitation of the mortuary premises is maintained at all times.
2. Cleaning/ sweeping is done at least twice in a shift and as and when required.
3. The morgue attendants supervise the cleaning and sanitation of the mortuary premises by sanitary attendants.
4. Washing of the Autopsy hall, cold chambers and rest of the mortuary building is conducted twice weekly.
5. Room/ post mortem table are being disinfected as and when required on case to case basis.
6. The fumigation of autopsy hall is conducted at least a week.
7. No staff or doctor will leave the autopsy hall before removing the PPE worn while handling the body.
8. Post-mortem instruments- All equipments / instruments are cleaned and disinfected appropriately between examinations. To deter rusting, instruments are dried and laid out on non-metal surface
9. Post-mortem tables- Autopsy tables are cleaned and disinfected between autopsies or at the end of the day. Following the autopsy, the disposals and drains on each autopsy table are cleaned and made free of tissue, blood and other bodily fluids or contents.

Disposal of Biohazardous Waste and Chemicals

1. Biohazardous/ chemical waste disposal is a routine part of the work of the mortuary unit.
2. All items in this category are to be handled with the minimum standard of protective equipment consisting of gloves, mask and some form of arm protection/gown.
3. The highest degree of risk should be assumed with all biohazardous waste due to variety of unknown factors involved.
4. The Biohazardous waste collection is daily done by an agency contracted by the hospital for same purpose.

Monitoring

The morgue attendant in their shift daily checks for:

1. Total number of bodies as per cold chambers and Body Register
2. Temperature of cold storage.
3. Cleanliness and hygiene of mortuary and surroundings.
4. Availability of water and electricity.
5. Any drainage related issue.
6. Any sign of presence of rodents/pests/animals in the mortuary.

7. Proper disposal of biomedical wastes.

Anti -Rodent Measures

1. The mortuary is kept free of rodents to prevent mutilation and damage to the dead bodies.
2. The anti-rodent service is undertaken by the sanitation department of JIPMER.
3. The checking of rodent activity is done regularly and any signs are dealt with anti-rodent measures.

Medical Facility

1. Hepatitis B vaccination is recommended for all personnel who are likely to come into contact with dead bodies.
2. The staff and the doctors of the hospital are covered by the scheme introduced by JIPMER Policy
3. Regular medical check-up are advised and available for staff who are handling and managing dead bodies.

Precautions in Post-mortem of HIV Positive Cases

1. All the persons doing the autopsy of such cases wear the HIV Dissection Kit available in the mortuary
2. The number and movement of persons around the autopsy table is limited to minimum.
3. Universal precautions i.e. 2 pairs of rubber gloves (ie, "double gloving") for handling tissues or blood, as well as wearing eye protection, cap, gown, mask, plastic apron, sleeve covers, shoe covers etc is observed by anyone participating in the autopsy dissection.
4. No person having exudative lesion, weeping dermatitis or external injury handle HIV positive cases.
5. Preferably, there should be only 1 blade in the dissection field at any time. A clean circulating assistant is assigned to obtain additional instruments, to take notes etc.
6. The outside of the container used for preserving specimens is free of blood and body fluids from the autopsy. The paperwork needed to accompany the containers is free of blood or body fluids. All the containers are labelled for the status of HIV.
7. After completing the autopsy dissection and sectioning, Needles, scalpel blades and syringes are put in a puncture-resistant container. The container is being collected by the outsourced Biomedical Waste agency.
8. After the autopsy the body is properly sealed and packed in a plastic sheet bag and checked for any leakage before handing to the relatives

9. During the autopsy, all tissues and fluids, including running water, are confined to the Autopsy tables.
10. At the conclusion of the autopsy, the area of the incision and any other areas of contaminated skin surfaces are sponged with 5% sodium hypochlorite; the sodium hypochlorite solution is left on the skin for 10 minutes before being washed off.
11. After the autopsy, any liquid on the autopsy tables is disinfected with an equal volume of 5% sodium hypochlorite or 2N sodium hydroxide.
12. All instruments are sent for autoclaving for at least 30 minutes or soaked in glutaraldehyde, 5% sodium hypochlorite or 2N sodium hydroxide for 15 minutes.
13. All gowns, gloves, plastic aprons, and other disposable supplies are put in separate bag, labelled properly and sent for incineration.

POST EXPOSURE PROPHYLAXIS

1. If a needle stick or a scalpel cut involving exposure to blood or body fluid occurs, the injured person stops dissecting immediately, allow the wound to bleed freely, wash the wound with soap and water, and then apply disinfectant to the wound.
2. For mucous membrane exposure, copious irrigation of the area with water or sterile saline.
3. The concerned individual reports to HIS for Anti-retroviral therapy (ART).
4. The exposed person gets tested for HIV antibody, HCV antibody, HBsAg, and other prescribed tests.
5. The deceased's blood is also tested for hepatitis C virus antibody and hepatitis B surface antigen (HBsAg)

CHAPTER-6

PROCEDURE FOR POSTMORTEM EXAMINATION OF MEDICOLEGAL CASES

1. JIPMER is one of the apex referral hospital of the country and on request, any medicolegal cases are entertained either for post mortem or medicolegal opinion from southern part of the country by central agencies like CBI, NIA, or from various state investigating agency or by various Courts of law of the country.
2. The post-mortem of MLC deaths of patients of other state/districts dying in JIPMER during treatment is also conducted.

Waive-Off of Post-mortem

1. The autopsy surgeon has no authority/jurisdiction regarding waiving off of the postmortem in MLC Deaths.
2. The police only, being the principal investigating agency and the rightful custodian of the body, have the authority to waive-off the postmortem in a MLC death.

INQUEST PAPERS

The following documents are required to be submitted to the autopsy surgeon for conducting the Postmortem. Written request/ requisition from police or competent authority like executive or judicial magistrate. All documents mentioned in the inquest papers check list must be provided so that the autopsy surgeon can begin postmortem examination.

Note: The police official making the request should not be below the rank of ASI.

1. Request for conducting Inquest – **Must**
2. Request for Postmortem – **Must**
3. Medico Legal Certificate, if any- desirable
4. Police Form 86 as per need of case- **Must**
5. Seizure memo (items seized at scene) - Desirable
6. Crime Scene assessment by CSI team / Photographs – Desirable (overall scene can be provided in CD/ Pen drive). Overall scenario information is very helpful otherwise precious time of medical man and investigator is lost in speculations and confabulations.
7. Statements of public/panch/ relatives – desirable
8. Death Summary in hospital death /treatment summary – most desirable if hospitalization was there.
9. Copy of First Information Report filed at the Police Station – desirable.

Pre Requisites for Conducting the Postmortem

1. Post-mortem inquest papers are received from **9:30 am to 3.30 pm** on normal working days and **9:30 am to 12 noon** on Saturday, Sunday and Holidays.
2. The mortuary closes at 4:30 pm on normal working days and at 1 pm on Saturday, Sundays and holidays.
3. The presence of Investigating officer (IO) of the case or the person who is filling the Postmortem request form (Not Below the rank of ASI) is compulsory, as the Postmortem Examination involves many procedure like identification of the body before Postmortem by the Investigating officer, giving detailed history to the autopsy surgeon, receiving of important samples etc.
4. In cases where inquest is done by the Judicial or Executive Magistrates, it is advisable for him/her to be present and have an interaction with the autopsy surgeon regarding the case. If they are unable to do so because of work exigency, the police officer (Not Below the rank of ASI) concerned with the case may be authorized in writing to conduct the PM proceedings.
5. The Investigating officer will report to the doctor on duty with the complete inquest papers.
6. The doctor on duty will go through the papers for any discrepancy and will then receive the case.
7. In cases of MLC death outside JIPMER the Investigating officer have to go to Central Admission Registry near police Post JIPMER for getting the case registered in the central database after the necessary formal request.
8. The Investigating officer will then submit the inquest papers in the mortuary office after which the Postmortem is started.
9. If the Investigating officer needs to constitute a Medical board for the Postmortem examination, he has to proceed according to the procedure and guidelines described in relevant chapter.
10. If the Videography/Still Photography of the case is needed the Investigating officer has to take due permission from the HOD/ Mortuary In-charge. The procedure and the guidelines regarding the Videography and still photography have been detailed in the relevant chapter.
11. The identity of the dead body must be confirmed by the relatives and the police before the start of the Postmortem.

12. There should be signature of at least two relatives and police regarding identification of the body.
13. In case of Unknown bodies, responsibility of the identification of the correct body lies with the Investigating officer.
14. The autopsy surgeon should study all available facts of the case prior to Postmortem examination from inquest report, statement of witnesses, hospital record etc.
15. No unauthorized person is allowed in the mortuary to watch the Postmortem proceedings.
16. Any high risk infectious diseases like AIDS, etc should be informed to the autopsy surgeon and special precaution should be followed depending upon the disease.
17. **JIPMER has facility to handle biosafety level 2 infected bodies. Any dead bodies infected /suspected to be infected with infection beyond bio safety level 2 pathogen autopsy will not be conducted**

Procedure after Autopsy

1. After Autopsy the body is stitched, reconstructed and cleaned, wrapped in hospital clothing and handed over to the Investigating officer by morgue attendant for further handing over to the next of kin of the deceased.
2. The clothing/plastic sheets to cover the body are provided by the police of the concerned case.
3. The Postmortem report is given in a typed A4 sized format in the prescribed Proforma (Annexure).
4. The viscera and other specimens preserved during the autopsy are handed over to Investigating officer through the mortuary technician/Morgue Attendant and the receipt of same is taken in the PM register.
5. The viscera is given with a forwarding letter and the inside jars are duly labelled.
6. The samples are sealed and marked by seal of the department. The specimens are duly signed by the Doctor and the relevant details are written on the samples.
7. Investigating officer should make sure before receiving the samples that they are duly signed, sealed with intact seals, the details are correct and sample of seal is issued.
8. The sample once received by the Investigating officer will be deemed assumed to be fulfilling all the above conditions.
9. If the dead body has to be preserved in cold storage after conduction of postmortem, the same has to be submitted in a requisition form

Procedure of Receiving of PM Reports

1. The PM reports are finalized by the doctor at earliest, preferably within 48 hrs. However, due to scientific deliberation with faculty/Board member as well as time constraints due to court evidences, etc. some more time may be essentially required in finalizing the reports in certain cases.
2. The doctors after completing the postmortem reports hand them over to MLC Staff. The police officer who has given request for the postmortem will receive the report from MLC office.
3. The reports can be received on normal working days in general duty hours i.e. Mon to Fri: 9:30 am to 4.30 pm and Saturday: 9:30 am to 1 pm.
4. Due to the confidentiality of PM reports, if the Investigating officer is not available then the police person coming for report collection should bring an authority letter duly forwarded by the concerned Investigating officer/SHO.
5. If the report is not ready, then the Investigating officer should contact the Head of Department
6. The copy of the reports will not be given to any other person. If the relatives want the copy of Postmortem report they should obtain the same from investigating officer.

CHAPTER-7

POSTMORTEM EXAMINATION

General Objectives of Postmortem Examination

1. To know the Cause of death.
2. To know the manner of death.
3. To find Time since death.
4. Time of injury.
5. To establish the identity of the deceased.

Postmortem Examination Procedure

The autopsy is a detailed and extensive procedure and all the theoretical details of the postmortem examination in different cases cannot be described. The brief account of the broad lines on which the postmortem examination is conducted is as follows:

A) External examination

1. Height, weight of the body.
2. Condition of the pupils.
3. Belongings over the body.
4. Condition of clothes.
5. Any abnormal Stains, blood, semen, mud, sand, colour change, faecal, foreign bodies etc present over body.
6. Evidence of any surgical procedures.
7. State of natural orifices.
8. Mark of identification in unknown bodies like: tattoos, scar marks, moles etc.
9. External findings like:
    I. Hypostasis-its extent, position and state of fixation.
    II. Rigor mortis - its state and distribution.
    III. Signs of decomposition like:
        - Greenish discoloration of right iliac fossa, abdomen, chest and other body parts
        - Distension of abdomen
        - Marbling of skin-area
        - Protrusion of tongue and eyeballs
        - Blood tinged froth at mouth and nostrils

- Blister and peeling of cuticle
- Bloating of face, neck, breast, penis/scrotum/vulva
- Regurgitation of stomach contents
- Prolapsed of rectum and faecal matter
- Prolapsed of uterus and expulsion of foetus
- Degloving, Loosening of hair/nails
- Maggots
- Skeletonization

B) External injuries

1. All the parts of the body will be examined for external injuries.
2. The injuries will be detailed in respect of type, size, situation, direction, edges, ends, colour changes/ healing process, surrounding area, foreign bodies, etc.
3. In Sexual assault cases vulva, vagina and anal region are carefully examined for presence of injury, semen, foreign bodies. Hymen is examined for recent/ old tears.

C) Internal Examination

1. The internal examination of the dead body should be thorough and complete.
2. All the three body cavities and the organs contained in them should be carefully examined even though the apparent cause of death has been found in one of them.
3. The internal examination is conducted on the following broad lines:

Head

I. The scalp should be looked for any extravasations of blood.
II. The Skull is examined for fractures.
III. After removal of vault by electric saw, the Dura matter is examined for tears, the presence of extra Dural haematoma is noted.
IV. After removing the Dura matter, subdural and subarachnoid spaces are examined for the presence of blood/pus/granulations etc.
V. Brain is removed and examined for softening, injury hematoma or any pathological condition like cyst and infection etc.

Neck

I. The neck tissues, vessels and muscles are examined for any extravasation of blood.
II. Hyoid bone, thyroid cartilage and tracheal rings are dissected and look for evidence of extravasations of blood and fractures.

III. Air passages are examined for the presence of soot, sand, mud, weed, froth and foreign bodies etc.

Oral cavity

I. Lips are everted and examined for injuries.
II. Mouth and pharynx are examined for injuries and presence of foreign bodies.
III. The teeth should be examined for injuries like loosening etc.
IV. Dentition should be noted in unidentified/mutilated remains.

Thorax

I. While exposing the chest wall any injury under the skin in tissues is noted.
II. Fractures of ribs/sternum/clavicle are noted.
III. The presence of fluid or blood present in the chest cavity is noted.
IV. Lungs- weight, consistency, congestion, oedema, injuries, signs of natural diseases etc.
V. Heart- pericardium and its contents are examined. The condition of the walls, chambers and valves are noted. The coronaries are examined for the patency / occlusion of lumen. The condition of the aorta and its branches is examined.
VI. Oesophagus is opened and examined for presence of varices, corrosion and other abnormalities.

Abdomen Pelvic cavity and Spinal

I. The abdominal cavity and pelvic cavity are examined for adhesion, congestion, inflammation of peritoneum, any exudation of fluid/ pus, perforation or damage of any organ.
II. The examination of abdominal organs like Liver, spleen, kidneys, pancreas, adrenals and intestines is carried out.
III. Stomach is removed after tying both ends and is dissected in a clean tray.
IV. The contents as well as the condition of stomach wall are examined.
V. The small intestine and large intestines are similarly examined.
VI. Urinary bladder is opened and examined.
VII. In females, the uterus and other genital organs are examined.
VIII. Testicles are dissected and exposed to look for injuries and diseases.
IX. All the bones and skeletal system are examined for the presence of any fracture or evidence of violence.

X. Spinal cord is dissected and examined for evidence of injury and disease in suspected cases only.

D) Preservation of samples

All the samples kept during autopsy examination should be properly labeled, sealed and handed over to IO after taking a receipt for the same. A sample of seal used to preserve the samples is given so as to maintain the proper chain of custody. The purpose of keeping the samples for relevant analysis should be mentioned in the postmortem report.

E) Opinion about cause of Death

The autopsy surgeon gives the opinion regarding cause of death based on the objective findings noted during postmortem examination. In cases where viscera has been kept to rule out concomitant poisoning but other injuries sufficient to death are also present the autopsy surgeon may give a provisional cause of death so as to lead the investigation to a logical conclusion which may be reviewed after receiving report of chemical analysis of viscera. The autopsy surgeon in doubtful and equivocal cases may also visit the scene of crime to have a better understanding of the circumstances and to correlate them with the autopsy findings.

F) Opinion about Time since Death

The paramount medico legal issue in any postmortem examination relates to the determination of time since death. This question arises most commonly in cases of unknown and known deaths. It is defined as the amount of time that has elapsed since death of the decedent at the time of postmortem examination. It is also synonym as postmortem interval i.e. interval between the time of death and postmortem examination. Its accurate estimation is a great challenge for forensic pathologist as it play a significant role in criminal cases to narrowing the field of suspect in an un witnessed crime as well as establishing the time frame of crime and so many. The following criteria may be employed to give an approximate time since death:

ESTIMATION OF TIME SINCE DEATH

Documentary-

1. Inquest papers

Post- mortem findings-

1. Algor mortis
2. Opacity of cornea
3. Post-mortem lividity
4. Rigor mortis
5. Signs of decomposition
6. Biochemical markers
7. Stomach contents
8. Urinary bladder contents
9. Insect activity

Scene of death-

1. Last call record/last seen
2. Internet activity record
3. Stopped watches
4. Last newspaper received
5. State of clothes (day/night)
6. Colour of grass (attached with body)

CHAPTER 8

UNKNOWN/ UNCLAIMED/ UNIDENTIFIED DEAD BODIES

Puducherry is one of the fast growing cities and is one the tourist spots. Every year thousands of people from different states come to the Puducherry for various reasons. Many of these live alone without any relatives or acquaintance in the city.

Sometimes the sudden demise of these people occurs due to various reasons and the body is found without any identification document, it poses great difficulty for police to establish their identity. These bodies are labelled as "unidentified/unknown dead bodies" (UIDB) and sent for medicolegal autopsy as a rule. Invariably there is recovery of skeletonised bodies due to decomposition which are also subjected to medicolegal autopsy.

There are two categories of such unidentified bodies. One is the beggars, vagabonds, destitute, who are unclaimed but well known homeless persons, dying from natural causes. The other category is the persons who are unidentified and dying from traumatic causes like road traffic accidents, railway accidents, homicides etc. They may not be necessarily homeless but their relatives do not come to know about the death of the deceased. So due to the lack of identification the police is unable to proceed with the investigation and the case mystery is kept pending forever.. The distinguishable identification marks like tattoo, old scars, old amputations, deformity, moles etc., are generally noted by the autopsy surgeons in UIDB and are mentioned in the autopsy report in the column of identifying features. In relation to teeth, abnormalities, deformity or any peculiar dental work which can help in identification of the person is noted during the autopsy. The autopsy surgeons generally keep a sample for DNA analysis for identification in such bodies. A central DNA database system in which the DNA samples of all such unknown deaths may be created. So that it can be matched at a stage when the claimant of such bodies appears and identification can be done leading to proper investigation of the case.

Sample Checklist of Features of Identification In Unidentified/ Unknown/ Unclaimed Dead Bodies

1. EXTERNAL FEATURES:

- Skin colour
- Hair colour
- Iris colour
- Scar mark
- Tattoo(with description)
- Any superadded finger-toes/phalanges
- Any amputated finger/toes/limbs
- Any surgical scar mark
- Any skin tag
- Birth mark
- Mole/Nevus
- Fingerprints
- Dental charting
- Any visible bone deformity
- Piercings
- Artificial body parts/Medical aids/Implants
- Clothing/Accessories/Ornaments

2. INTERNAL FINDINGS:

- Medical implant
- Any absent organ
- Scar for surgery
- Skeletal findings
- Grossly visible organ disease

CHAPTER-9

MEDICOLEGAL EXAMINATION OF ACCUSED OF SEXUAL VIOLENCE/POTENCY

In India, all males, above the age of seven years, are presumed to be potent, unless and until the contrary is proved for criminal investigation; however for civil cases like adoption, disputed paternity, nullity of marriage and divorce, a male is said to be impotent when there is inability to develop or maintain a penile erection sufficient for consummation of marriage (making a marriage or relationship complete by having sexual intercourse).

In criminal cases, the potency of an accused in current practice is determined by the fact that after general physical examination, systemic examination (CNS, CVS, Respiratory system & abdominal findings), absence of any major illness and anatomically normal external genitalia, no condition could be found which can interfere in an individual's capability of performing sexual intercourse under normal circumstances. 'Casper' states that the possession of virility and power neither requires to be, nor can be, proved to exist by any physician but is supposed to exist just like any other normal function. Even after having a normal result for the extensive list of investigations, which exclude the organic causes of sexual dysfunction, an accused man can still be impotent at any particular situation. So, the opinion given is conventionally in double negative and is written as ***"There is nothing to suggest that the person examined is incapable of performing sexual intercourse under normal circumstances". However, the opinion can be given directly also, as "The examined person is capable of performing sexual intercourse."***
The Department of Forensic Medicine and Toxicology conducts the Medicolegal Examination of the accused of sexual assault.

JURISDICTION

The Jurisdiction of the cases dealt in the department is the same as that of the Post-mortem cases.

DOCUMENTS REQUIRED

1. Request application in the name of Department of Forensic Medicine and Toxicology.
2. FIR/DD copy.
3. MLC No provided by the Forensic Medicine Department, JIPMER.

PROCEDURE

1. The medico-legal examination is conducted round the clock in Clinical Forensic Medicine in Mortuary.
2. A team of doctors involving Urologist and forensic expert (A faculty along with Senior resident and junior resident on the sexual assault duty roster) is constituted and will look after the cases received in the casualty or the department. The medical examination will be done round the clock.
3. The application for conducting the examination has to be made by the Investigating Officer of the case.
4. The Investigating Officer of the case should accompany the accused. This is required for better understanding of the circumstances of the case, so as to preserve the necessary trace evidences.
5. If he/she is unable to do so, the name of the police person accompanying should be clearly written in the application and same will be mentioned in the MLC.
6. The IO should ensure that accompanying police know the history and details of the case.
7. Then he will report to the doctor on duty in the Forensic Medicine department who will conduct the examination of the accused along with the Urologist.

EXAMINATION OFTHE ACCUSED

The examination proceeds in the following manner:

1. Relevant medical history is taken.
2. The general orientation to time, place and person is tested.
3. The vitals like pulse, BP, etc are taken.
4. Two marks of identification are duly noted.
5. General physical examination is done for the injuries.
6. General systemic examination is done for the following systems:
    a. Central nervous system
    b. Respiratory system
    c. Cardio-vascular system
    d. Per abdomen
7. Any other relevant finding if present is duly noted.
8. Local examination is done for the genitalia that includes:
    a. Developmental assessment.
    b. Pubic hair.

c. Penis and abnormalities.
d. Presence/absence of smegma.
e. Examination of scrotum.
f. Presence of any injuries/congenital anomalies.
g. Superficial reflexes are tested.

9. Respective samples are preserved, sealed, signed and are handed over to the police personnel along with the sample of seal.
10. The opinion is formulated for the condition of the accused and is subsequently written on the Medicolegal Report of the accused.
11. The MLR is made on the departmental proforma **(Annexure).**
12. The MLR is duly signed and a left thumb impression is taken on the MLR.
13. The police person then receives the samples and MLR after signing and putting up his personal details on the original sheet.
14. The office copy is kept in the departmental record.

MEDICOLEGAL EXAMINATION OF SURVIVOR OF SEXUAL VIOLENCE

A person (male / female / transgender) against whom an assault is perpetrated is termed as a survivor. This term gives a positive hue to the self of the person; it conveys that s/he has managed to pull him/her self together in spite of what s/he went through. We have not used the term "victim" as this takes away from the person's agency. We also do not use "patient" as this is a general term used for a person with a disease. Sexual assault is not a disease but a violation of human rights.

A survivor may approach a health facility under circumstances:

1. On his/her own;
2. With a police requisition after police complaint;
3. With a court directive.
4. By doctor during the course of treatment

Call given to on call duty faculty in department of Forensic Medicine, Gynaecology, Psychiatry, Paediatrics and other speciality as required.

In all three circumstances, seeking informed consent for examination and evidence collection is mandatory (164 (A) CrPC).

- Consent of the patient should be taken for the following purposes:
    1. Examination
    2. Collection of the evidence
    3. Treatment
    4. Informing police for purposes of investigation
- The consent form must be signed by the person him/herself if s/he is above 12 yrs. of age. Consent must be taken from the guardian/ parent if the survivor is under the age of 12 years or if the survivor is unable to give his/ her consent by reason of mental disability. (Section 89 IPC)
- The consent form must be signed by the survivor, a witness as well as the examining doctor.
- Any major 'disinterested', mentally sound person may be considered as a witness. In the hospital set-up this could be a nurse or other hospital employee.
- Please note that the survivor or guardian may refuse to give consent for any part of examination. In this case the doctor should explain the importance of examination and evidence collection. It should also be explained that refusal for such examination will not affect/compromise treatment. Such informed refusal for examination and evidence collection must be documented (164 (A) CrPC).
- Patient and her relative/ guardian should be explained that at any stage during examination and evidence collection she may ask the doctor to stop and that it will not have any effect on the quality of her treatment.
- Even if the survivor refuses consent to submit evidence to the Forensic Science Laboratory (FSL) and reveal information to the police for purposes of investigation, she should be made aware that if at a later date she changes her mind and wants to pursue a legal course of action, the collected evidence may be useful to seek justice.
- A survivor may come to the hospital only for treatment for effects of assault. Under 39 CrPC the doctor is not bound to inform the police. Informed refusal for not informing the police should be documented. But still MLC should be made and police has to be informed. Neither court nor police can force the survivor to undergo medical examination. It has to be with the survivor/parent/guardian's informed consent (depending on the age).
- Voluntarily reporting to health facility: In the past, sexual assault survivor examination was only done after receiving a police requisition. Now the Supreme Court has clarified

in case of Manjanna v State of Karnataka (2000) that police requisition is not mandatory for a sexual assault survivor to seek medical examination and care. The doctor should examine such cases even if the survivor reports to the hospital first without FIR.

- Requisition: Once the case is booked in a particular police station/court, the investigating officer (minimum rank of sub-inspector of police) of the case forwards a requisition for medical examination of survivor of sexual assault.
- The police constable may accompany the survivor as escort along with the requisition from the investigating officer.

Medical History

Conventionally, obstetric history including past history of pregnancy, abortions etc is recorded. However, this may be considered an invasion of privacy as it forces survivors to reveal past sexual history/practice. Hence such history should not be routinely sought. (Section 146 of the Indian Evidence Act) Relevant medical history in relation to sexually transmitted infections (gonorrhea, HIV, HBV etc). This has a bearing on what gets transferred between survivor and accused of sexual assault. Such a history can be elicited by asking about discharge per-urethra/per-anus, warts, ulcers, burning micturition, lower abdominal pain etc. Based on this information re-examination including investigations can be done after incubation period of that disease.

- Relevant surgical history in relation to treatment of fissures/injuries/scars of ano-genital area should be noted.
- Information related to past abuse (physical/sexual/emotional) should be recorded. This is important in order to understand whether there are any health consequences related to the assault, which would also require referral for further care. This information should also be kept in mind during examination & interpretation of findings.

Sexual Assault History

Keep in mind that narration of the history of sexual assault might be a traumatizing experience for the survivor. It is very difficult for most survivors to talk about this and s/he might not want to tell you all the details.

- Be very sensitive of this and explain to the survivor that the process of history taking is important for further treatment and for filing a case if needed.
- Talk to the survivor in a non-threatening environment.

- Do not pass judgmental remarks or comments that might appear unsympathetic and disbelieving. An accurate history can be obtained only by gaining the trust of the survivor and not by accusing him/her of lying.
- Police officers must not be present while history is being recorded. If the survivor is comfortable with a relative being around while recording the history then the relative could be present with the consent of the survivor.
- History of the incident, documented specifically in the survivor's own words has evidentiary value in the court of law as this is being recorded by neutral and unbiased doctor. The doctor should record it completely as it may be the first opportunity for the survivor to narrate her history.
- Details of the place of the assault, time, nature of force used, and areas of contact are recorded here. If the assailants are known, please ask and mention the names of the assailants. If any sensitive information is revealed (such as identity of assailants) it is better to have the identity (name) and signature of the informant (survivor or her parent/guardian in case of minor).
- Information collected on activities like bathing, washing genitals (in all cases) rinsing mouth, drinking, eating (in oral sexual assault) has bearing on the evidentiary outcome of trace evidence collected from these sites.
- Please specifically note history of injury marks that the survivor may state to have left on the assailant's body as it can be matched eventually with the findings of the assailant's examination.
- Pertinent data of the assault with regard to injuries, threats and weapons used must be recorded. While recording such data, please note the following:
    - Physical violence: mention weapons or objects used. Pushing, banging, slaps, kicks, blows with sticks, acid burns, gun shots, knife attacks etc. are examples of physical violence. Survivor may have had blunt trauma which should be looked for during examination.
    - Verbal threats should be recorded in survivor's words, eg. harming her or her near and dear ones. Threats to divulge information regarding occurrence of the assault to others will also amount to a threat.
    - Information regarding attempted penetration or completed penetration by penis/finger/object in vagina/anus/mouth should be properly recorded along with

information about emission of semen. Indicating that penetration was complete precludes the need to indicate that it was attempted.

- There is a wide range of acts that amount to 'sexual assault' and ‘rape’ as defined in sections 354, 354 (A) and 375 IPC. These could be penetration of the vagina/mouth/anus by the penis/finger/object, or other acts such as masturbation of the assailant by the survivor, masturbation of the survivor by the assailant, oral sex by the assailant on the survivor or sucking, licking, kissing of body parts. While recording a history of sexual assault, it is important to probe whether these acts occurred or not. It is observed that generally doctors are awkward in asking for history of the sexual act. If details are not entered it may weaken the survivors' testimony.

  History of oral sex, anal sex and masturbation should be asked in simple language. In case of minor children, illustrative books or a doll can be used if available, to elicit the history of the assault. When it is difficult to elicit history from a child, please call an expert. Information about emission of semen outside the orifices should be elicited as swabs taken from such sites can have evidentiary value.
- Information regarding use and status of condom during the assault is relevant because in such cases, vaginal swabs and smears would be negative for sperm/semen.
- If there is a history of last consensual sexual intercourse in the week preceding the assault, it should be recorded because detection of that sperm/semen has to be ruled out. While seeking such history, explain to the survivor why this information is being sought, because the survivor may not want to disclose such history as it may seem invasive.
- If the survivor is menstruating at the time of examination then a second examination is required on a later date in order to record the injuries clearly.
- Some amount of evidence is lost because of menstruation. Hence it is important to record whether the survivor was menstruating at the time of assault/examination.
- The same applies to bathing, douching, defecating, urinating and use of spermicide after the assault.
- If there is vaginal discharge, record its type, i.e., texture, colour, odour, etc.

Forensic Evidence Collection

Before you begin, make an assessment of the case and determine what evidence needs to be collected. This procedure cannot be done mechanically and will require some analysis. This assessment will have to be made on a case-to-case basis.

- The nature of forensic evidence collected will be determined by three main factors - nature of assault, time lapsed between assault and examination and whether the person has bathed/washed herself since the assault.
- If a woman reports within 96 hours of the assault, all evidence including swabs must be collected without fail, in keeping with the history of assault.
- The likelihood of finding evidence after 72 hours is greatly reduced, however it is better to collect evidence upto 96 hours in case the survivor may be unsure of the number of hours lapsed since the assault.
- Please keep in mind that spermatozoa can be identified only for 72 hours after assault. So if a survivor has suffered the assault more than three days ago, please refrain from taking swabs for spermatozoa. In such cases swabs should only be sent to FSL for tests for identifying semen.
- Evidence on the outside of the body and on materials such as clothing can be collected even after 96 hours.
- The nature of swabs taken is determined to a large extent by the nature of assault and the history that the survivor provides. The kinds of swabs taken should be consistent with the history. For example, if the survivor is certain that there is no anal intercourse, anal swabs need not be taken.
- Request the survivor to stand on a large sheet of paper, so as to collect any specimens of foreign material e.g. grass, mud, pubic hairs or scalp hairs etc. which may have been left on her person from the site of assault or from the accused. This sheet of paper is carefully folded and preserved in a bag to be sent to the FSL for trace evidence detection.
- Clothes that the survivor was wearing at the time of the assault are of evidentiary value if there are any stains/tears/trace evidence on them. Hence they must be preserved. Please describe each piece of clothing in the table provided. Presence of stains - semen, blood, foreign material etc - should be properly noted. Also note if there are any tears or other

marks on the clothes. If clothes are already changed then the survivor must be asked if s/he has the clothes that were worn at the time of assault and these must be preserved.

- Always ensure that the clothes and samples are air dried before storing them in their respective packets.
- Ensure that clothing is folded in such a manner that the stained parts are not in contact with unstained parts of the clothing.
- Pack each piece of clothing in a separate bag, seal and label it duly.

Evidence from the Body:

- Based on Locard's principle of exchange there is exchange of bodily evidence between accused and survivor.
- Collect oral swab for detection of semen and spermatozoa. Oral swabs should be taken from the posterior parts of the buccal cavity, behind the last molars where the chances of finding any evidence are highest.
- Swabs are used to collect bloodstains on the body, foreign material on the body surfaces seminal stains on the skin surfaces and other stains.
- Detection of scalp hair and pubic hair of the accused on the survivor's body (and vice-versa) has evidentiary value. Collect loose scalp and pubic hair by combing. Intact scalp and pubic hair is also collected from the survivor so that it can be matched with loose hair collected from the accused. All hair must be collected in the catchment paper which is then folded and sealed.
- If there is struggle during the sexual assault, with accused and survivor scratching each other, then epithelial cells of one may be present under the nails of the other. Examine nail scrapings and nail clippings for epithelial cells (this can also be used for DNA detection). Clippings and scrapings must be taken for both hands and packed separately. Ensure that there is no underlying tissue contamination while clipping nails.
- Blood is collected for grouping and also helps in comparing and matching blood stains at the scene of crime.
- Collect blood and urine for detection of drugs/alcohol as the influence of drugs/alcohol has a bearing on the outcome of the entire investigation. If such substances are found in the blood, the validity of consent is called into question. In a given case, for instance, there may not be any physical or genital injuries. In such a situation, ascertaining the

presence of drug/alcohol in the blood or urine is important since this may have affected the survivor's ability to offer resistance.

- Venous blood is collected with the sterile syringe and needle provided and transferred to 3 colour coded vaccutainers.
- Testing for blood group and HIV, VDRL should be sent to the hospital laboratory.
- Urine sample may be collected in a container to test for drugs and alcohol levels as required.
- Note the time drugs/metabolites remain in the body.
    1. Alcohol - Found up to 10 hours.
    2. Rohypnol (Flunitrazepam) - Found up to 36-72 hours.
    3. GHB (Gamma Hydroxybutyric Acid) - Found up to 10-12 hours.
    4. GLB (Gamma Butyrolactone) - Found in urine up to 6 hours and in the blood up to 24.

Genital and Anal Evidence:

- In the case of any suspected seminal deposits on the pubic hair of the woman, clip that portion of the pubic hair, allow to dry in the shade and place in an envelope.
- Pubic hair of the patient is then combed for specimens of the offender's pubic hair. A comb must be used for this purpose and a catchment paper must be used to collect and preserve the specimens. Cuttings of the pubic hair are also taken for the purpose of comparison or to serve as control samples. If pubic hair has been shaved, do not fail to make a mention of it in the records.
- Take two swabs each from the vulva, vagina and anal opening for ano-genital evidence. Swabs must be collected depending on the history and examination. Swabs from orifices must be collected only if there is a history of penetration. One vaginal smear is to be prepared on a glass slide provided, air-dried in the shade and placed in an envelope. This extra wet smear prepared should be examined for spermatozoa under the microscope. This will aid the doctor in writing opinion with more certainty.
- Often lubricants are used in penetration with finger or object, so relevant swabs must be taken for detection of lubricant.
- Swabs for microbiological tests for infections may be sent as per institutional policy and availability.
- Swabs must not be dried in direct sunlight.
- Always ensure that all the envelopes containing the samples are labeled

General Examination

- Record the mental status of the survivor after the incident accurately. This may offer evidence of ingestion or injection of drug / alcohol voluntarily or forcibly or ignorantly.
- Rape trauma syndrome is an entity with both physical and emotional components with acute and chronic symptoms. To arrive at a diagnosis of Rape trauma syndrome mention of mood is important.
- Make an assessment of the emotional and mental state of the woman and record it (one may mention the mood in terms like shock, scared, numb, etc. Please note that "the patient is indifferent, detached or controlled" may be used against her by the defense hence such reference may be avoided).
- Height and weight are relatively important in assessing physical age.
- A general examination begins with the inspection of the body surface for bruises, scratches, bites and other injuries. Specifically look for marks on the face, neck, shoulders, breast, upper arms, buttocks and thighs.
- Note and describe all injuries. Describe the type of injury - abrasion, contusion, laceration, incised etc.
- Mention possible weapon of infliction in the words such as - hard, blunt, rough, sharp, etc.
- It is important to keep in mind that injuries might not always be seen. There may be circumstances in which the survivor may have been threatened with bodily harm, physically restrained, or afraid to resist for other reasons, thus explaining absence of injuries. In fact, only one-third of cases of sexual assault have visible injuries. But cases of assault have been proved even in the absence of injuries.
- Injuries are best represented when marked on body charts. They must be numbered on the body charts and each injury must be described in detail.
- Photographic evidence is even better than body charts, provided the survivor consents to it.
- Actual measurements, site, shape, with time since injury should be described.

Ano-Genital Examination

- A careful observation of the perineum is made for evidence of injury, seminal stains and stray pubic hair.

- In case of female survivors, the vulva, labia, fourchette, hymen and introitus are inspected likewise. A note is made of any swelling, bleeding and tearing, these being signs of recent injury.
- Bleeding/swelling/tears/discharge/stains/warts around the anus and anal orifice must be documented. Examine the anal sphincter tonicity and document findings. Per-rectal examination to detect tears/stains/fissures/hemorrhoids in the anal canal must be carried out and relevant swabs from these sites should be collected.
- Examination of the vagina of an adult female is done with the help of a sterilized speculum. Gentle retraction allows for inspection of the vaginal canal. Look for bruises, redness, bleeding and tears, which may even extend into the perineum, especially in the case of very young girls. In case injuries are not visible but suspected; 1% Toluidine blue is sprayed and excess is wiped out. Micro injuries will stand out in blue.
- Do not perform two-finger test of admissibility in cases of sexual assault as information about past sexual conduct has been considered irrelevant to the case in several judgments. (Section 146 of the Indian Evidence Act).
- The examination and treatment as needed may have to be performed under general anaesthesia in case of minors and when injuries inflicted are severe.
- Micro injuries are better appreciated under a colposcope. Per vaginal and per speculum examination is not a must in the case of children when there is no history of penetration and no visible injuries. Per speculum examination should be done with a sterile water/ saline (preferably warm) lubricated speculum.
- Routinely, there is a lot of attention given to the status of hymen. However it is largely irrelevant because the hymen can be torn due to several reasons such as cycling, riding or masturbation among other things. Even if the hymen is intact, forceful sexual penetration cannot be ruled out.
- If there is vaginal discharge, comment on the characteristics ie. texture, colour, odour, etc.
- As with general examination, genital findings must also be marked on body charts and numbered accordingly.

Signature and seal

After the examination the medical practitioner should draft the report, formulate the opinion, sign the report and handover report and sealed samples to police under due acknowledgement.

- On the last sheet, please mention how many pages are attached. It is imperative that the doctor signs each page of the report so as to avoid tampering.
- It is important that one copy of all documents be given to the survivor as it is his/her right to have this information. Copies must also be given to the police and FSL and one copy must be kept for hospital records. It is hence preferable that all documentation be filled out in quadruplicate.
- All evidence needs to be dried, packed and sealed in separate envelopes. The responsibility for this lies with the examining doctor.

Treatment Guidelines and Psychosocial Support (decided by the treating physician)

Health care providers, both public and private, are obligated as per section 357C to provide prompt care to survivors of sexual assault. Not doing so is liable to punishment under section 166 B.

- Urgent medical needs must be prioritized.
- At the end of the first examination the survivor is assessed and treated, advised or referred for conditions like injury, sexually transmitted diseases and pregnancy that may result from the assault. Counselling and psychosocial support should be offered. In the absence of such expertise kindly refer the survivor to the nearest competent personnel.

1. **Sexually Transmitted Infections:** If clinical signs are suggestive of STD, collect relevant swabs and start PEP. If there are no clinical signs, wait for lab results.

- For non-pregnant women, the preferred choice is Azithromycin 1gm stat or Doxycycline 100mg bd for 7days, with Metronidazole 200mg (7days) with antacid.
- For pregnant women, the preferred choice is Amoxycillin/ Azithromycin with Metronidazole (NO METRONIDAZOLE TO BE GIVEN IN THE 1ST TRIMESTER OF PREGNANCY)
- Hepatitis B. Draw a sample of blood for HBsAg and administer 0.06 ml/kg HB immunoglobulin immediately (anytime upto 72 hours after sexual act).

2. **Pregnancy Prophylaxis (Emergency Contraception)**

- The preferred choice of treatment is 2 tablets of Levonorgestrel 750 μg (Norlevo), within 72 hours. If vomiting occurs, repeat within 3 hours.

  Or

  2 tablets COCs Mala/ Ovral

  Mala/Ovral G => 2 tablets stat repeated 12 hours within 72 hours

  Novelon/Femilon/Ovral L => 4 tablets stat repeated after 12 hours within 72 hours.
- Although emergency contraception is most efficacious if given within the first 72 hours, it can be given for up to 5 days after the assault.
- Pregnancy assessment must be done on follow up and the survivor must be advised to get tested for pregnancy in case she misses her next period.

3. **Lacerations:** Clean with antiseptic (Savlon/Dettol) or soap and water. If survivor is already immunised with Tetanus Toxoid or if no injuries, TT not required. If there are injuries and survivor is not immunised administer ½ cc TT IV. If lacerations require repair and suturing, which is often the case in minor girls, refer to the nearest centre offering surgical treatment.
4. **Post Exposure Prophylaxis (PEP)** for HIV should be given if a survivor reports within 72 hours of the assault. Before PEP s prescribed, an assessment of HIV risk must be done.*
5. **Psycho-social Support**

CHAPTER-10

PRESERVATION OF TISSUES FOR HISTOPATHOLOGY

1. Desired and relevant tissue/organ section from the dead body is preserved in 10% formalin or in case of brain 30% formalin.
2. The residents after preserving the tissues/organ during postmortem will duly label the jars. The histopathology request form is filled with details like history of case and proper labelling. The request form should contain the name of the faculty on duty of the day of the case. The form will be forwarded by faculty in-charge (histopathology) or HOD.
3. The form and formalin jar containing tissue to the pathology lab (by the mortuary DLR) for further processing and reporting
4. The Medicolegal samples will be accepted by Pathology Lab Technician after proper forwarding either by Faculty In-charge/HOD.
5. A register will be maintained in the mortuary office.
6. While submitting a sample it should be clearly written on the form that whether sample is for Medicolegal use/Thesis/Academic purpose/ Research Project
7. In Medicolegal samples, after the slides are made, they will be handed over to concerned residents only when the Faculty on Duty has written a letter for report formation in consultation with the pathology.
8. In cases of research projects, due acknowledgement should be given to the Histopathology lab personnel for helping in the project.

CHAPTER-11

GUIDELINES REGARDING CONSTITUTION OF MEDICAL BOARD

For the cases of extraordinary and sensitive nature such as custodial deaths/encounter deaths, medical negligence etc., on receipt of request from the police, the medical superintendent in consultation with the HOD, Forensic Medicine constitute a three members board involving doctors from the speciality concerned and Forensic Medicine.

Due care will be taken not to assign the board to the same hospital or institution where the alleged medical negligence has taken place

Videography/Photography of the Post-mortem examination:

1. The arrangements of the Videography and still photography of the post-mortem examination will be made by the I.O.
2. The Videography and Still photography has to be done in accordance with the NHRC Guidelines

CHAPTER-12

GUIDELINES FOR VIDEO-FILMIMG AND PHOTOGRAPHY OF POST-MORTEM EXAMINATION

The NHRC has formulated guidelines for video filming in order to improve the quality of Video-Filming in cases of custodial deaths, encounter deaths and death in police action.

1. In Cases while conducting post-mortem examination of the deceased photographs of the deceased should be taken and the post-mortem examination of the deceased should be video filmed and a copy should be sent to the commission.
2. The **arrangements** of the Videography and still photography of the post-mortem examination will be made by the I.O.
3. The **responsibility** of maintaining privacy, confidentiality and chain of custody of the recorded proceedings will solely be of the Investigating Officer/agency and the legal heirs of the deceased will be communicated the same.
4. The I.O will take the **permission** for Videography in the form **(Annexure)** from the Mortuary office, fill it in duplicate and submit to the autopsy surgeon.
5. One copy of the form will be attached to the inquest papers and other copy will be kept in Mortuary Record.
6. The **aim** of video-filming and photography of post-mortem examination should be
    I. To record the detailed findings of the post-mortem examination, especially pertaining to marks of injury and violence which may suggest custodial torture.
    II. To supplement the findings of post-mortem examination (recorded in the post mortem report) by video graphic evidence so as to rule out any undue influence or suppression of material information.
    III. To facilitate an independent review of the post-mortem examination report at a later stage if required.
7. Video-filming and photography of post-mortem examination should be done in the following manner:
    I. At the time of video-filming of the post-mortem examination the voice of the doctor conducting the post-mortem should be recorded. The doctor should narrate his prima-facie observations while conducting the post-mortem examination.

II. A total of 20-25 coloured photographs covering the whole body should be taken. Some photographs of the body should be taken without removing the cloths. The photographs should include the following:

   a. Profile photo-face (front, right lateral and left lateral views), back of head.
   b. Front of the body (up to torso-chest and abdomen) and back.
   c. Upper extremity-front and back
   d. Lower extremity- front and back
   e. Focusing on each injury/lesion-zoomed in after properly numbering the injuries.
   f. Internal examination findings (2 photos of soles and palms each, after making incision to show absence/evidence of any old/deep seated injury).
   g. In firearm injuries while describing, the distance from heel as well as midline must be taken in respect of each injury which will help later in reconstruction of events.

III. Photographs should be taken after incorporating the post-mortem number, date of examination and a scale for dimensions in the frame of photographs itself.

IV. While taking photographs the camera should be held at right angle to the object being photographed.

V. Video-filming and photography of the post-mortem examination should be done by a person trained in forensic photography and videography. A good quality digital camera with 10X optical zoom and minimum 10 mega pixels should be used.

CHAPTER-13

PROCEDURE FOR SUBSEQUENT OPINION

The Department of Forensic Medicine and Toxicology caters cases for subsequent opinion regarding post-mortem and other reports prepared by the doctors of the Department.

1. The IO is required to attach in original the Postmortem Report, Viscera Report/ FSL Report, inquest papers, crime scene photographs if any, the relevant reports of samples and any other documents as required.
2. The application for subsequent/final opinion should be attached to the documents mentioned above and the whole file be forwarded by SHO of the concerned police station.
3. The documents are then checked and signed by the doctor on duty and further forwarded to the medico-legal records room where the attendant makes a recheck and the file is put forward for the perusal of HOD.
4. The head of department then deputes the doctor who did the case for the opinion.
5. In case if the doctor who originally performed the case is currently not working in the Department following procedure to be followed:
    a. If the person is working in any government hospital at Puducherry, the IO is told to get the opinion from the concerned doctor.
    b. If the doctor has left Puducherry, a new doctor is deputed forgiving the opinion.
6. If required the IO can be called by the doctor to discuss the case.
7. Opinion is then given in two copies and is deposited to the medico-legal record room by the doctor.
8. The IO is called upon by the concerned and the opinion is dispatched accordingly after proper entries being made in the register and a receiving is made.
9. The office copy of the opinion is kept in the medico-legal record room.

Chapter 14

PROCEDURE FOR SAMPLE RESEALING

1. The samples that are preserved in any case, whether post-mortem or MLC are sealed and marked by Lac seal of the department. The specimens are duly signed by the Doctor and the relevant details are written on the samples.
2. The IO should make sure before receiving the samples that they are duly signed, sealed with intact seals, the details are correct and sample of seal is issued.
3. A receiving in written is given by the IO for the samples either in the Mortuary register or in the MLC.
4. The sample once received by the IO will be deemed assumed to be fulfilling all the above conditions.
5. **If the doctor of the respective case has left JIPMER the request is forwarded to the head of** the **department, who then deputes a competent doctor for further perusal.**
6. Resealing is the process done for the samples in the following conditions:
    a. Seals are broken.
    b. Leaking sample.
    c. Tearing of Label.
    d. The Label details are blurred due to leakage of fluids.
    e. Damaged sample of seal.
    f. The encasing is damaged.
    g. Objection if any from CFSL/FSL.
7. For resealing/Duplicate sample seal purpose, the following procedure will be followed:
    a. A written application by the IO forwarded by the SHO of respective police station mentioning the reason why resealing is required.
    b. Objection if any, in written by CFSL/FSL.
    c. Relevant post-mortem report of the case in original.
    d. Inquest papers if required.
    e. The doctor who performed the case will carefully check the documents.
    f. The sample including the outer casing as in viscera samples is carefully examined and any variation if seen is duly noted.
    g. The outer casing including the seals and the condition is noted.

h. In viscera leakage, the case is opened and then individual sample cases are inspected for any damage or leakage.
i. If the labelling papers of samples are damaged a new form is duly filled in the present date mentioning the resealing date.
j. The samples are then resealed.
k. A note is made on the application regarding the findings observed during the process. The noted details are duly signed and a seal of department is put up.
l. All the resealing work will be done in the current date.
m. The covering letter and other relevant documents are then attached to the respective case report in the departmental record
n. The IO is given the Copy of the application.
o. The sample is handed over to the IO after proper receiving and is instructed to take proper care of the samples.

CHAPTER-15

MEDICOLEGAL RECORDS MAINTENANCE

1. The Department of Forensic Medicine and Toxicology maintains and preserves the record of postmortem reports, their subsequent opinions and the MLCs made in the Department.
2. One Mortuary clerk is deputed for the proper preservation and maintenance of the medicolegal records. And also inform to the doctor regarding the summon brought by the police to the office for receiving.
3. The postmortem reports are kept in the Mortuary Office
4. The record of subsequent opinions and the MLC are maintained by the office staff of the mortuary.
5. The copy of PM reports and MLCs will not be issued to the relatives or general public.
6. Any person desirous to obtain the same have to submit a no objection certificate from the investigating officer / police station or its equivalent and application with identity proof stating the purpose and the supporting documents to mortuary office and the decision will be taken accordingly.

CHAPTER-16

ORGAN DONATION

1. The Organ transplantation is often the only treatment for end state organ failure, such as liver and heart failure. Although end stage renal disease patients can be treated through other renal replacement therapies, kidney transplantation is generally accepted as the best treatment both for quality of life and cost effectiveness. The organ transplantation is now an achievable dream with the advancement of surgical skills and brain dead cadaver. The demand for various organs like kidneys, liver, heart, cornea etc is hence increasing day by day.
2. The Department of Forensic Medicine and Toxicology enforces the education and practices in the field of cadaveric organ donation.
3. The kin of the deceased are the rightful custodian of the body and for any organ/tissue donation, their consent is mandatory.
4. The doctors and mortuary staff provide support and infrastructure in this noble cause.
5. The Mortuary In-charge, resident doctors and other faculty of the department are readily available for any further queries if needed.
6. The relatives are made aware and encouraged by the doctors and the Mortuary staff for taking part in the organ donation.
7. The staffs of the mortuary involved has been awarded certificate of appreciation for their activity

CHAPTER-17

GRIEVANCE REDRESSAL MECHAMISM

1. The Department of Forensic Medicine and Toxicology believes in the process of continuous improvement and introspection. Any kind of suggestion/complaints intended for the betterment of department are always welcome.
2. The police persons and the general public have the liberty to report any problem faced by them in the mortuary.
3. There is a register maintained in mortuary office room during working hours
4. A Suggestions/Complaint Box have been installed near the entrance of Mortuary office wall. It is kept locked and the keys are in the custody of office clerk.
5. Both the Grievance register and the Complaint box are frequently checked by the HOD.
6. The information to the relatives regarding lodging of their complaints/suggestions has been displayed at the entrance of Mortuary.
7. The grievance/suggestions can also directly be submitted to any of the following:
    a. Head of the department, Forensic Medicine.
    b. Medical Superintendent, JIPMER.
8. In cases of grievance regarding the functioning of the mortuary steps will be taken for improvement.
9. In cases of complaints against specific individuals the disciplinary action will be initiated as per hospital rules.

CHAPTER 18

Important Phone Numbers

S.No	Name	
1	Professor and Head	0413 2296213 + 91 9442070703
2	Forensic Department Office	0413 2296211
3	Mortuary office	0413 2296519
4	Reception	0413 2296676