

CHALLENGES OF AUTOPSY AT CRIME SCENE; PRACTICAL PROBLEMS AND SOLUTIONS

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Abstract:

Autopsies are usually done in a controlled condition at a mortuary affiliated with the State Government. However, on a few occasions, it may not be possible to bring the deceased from the crime scene or require circumstantial evidence for a meticulous autopsy opinion formation undertaking autopsy at the spot or crime scene. In this case, series three number of spot autopsies were conducted by the Department of Forensic Medicine and Toxicology, SRM Medical College, Kalahandi in a nearby jungle in a short time interval of two months with police/magistrate requisition.

The challenges faced were difficulty reaching the spot, identification of the deceased, collection of evidence, collection of circumstantial evidence, and opining on the cause, manner, and method of death. Local public and media interferences cannot be ignored. Comprehensive reports were produced following the autopsy at the spot, which may be helpful to the police for further investigation.

Key words

Spot autopsy, challenges, crime scene.

INTRODUCTION

An autopsy is a medical examination of a body after death. Pathologists perform autopsies to find the specific cause and manner of death.¹ Post-mortems are usually carried out in the hospital mortuary in a special post-mortem examination room, similar to an operating theatre. In certain circumstances, they may be carried out in the local public mortuary, or

a regional centre for centre for specialist post mortems.² Experience in the investigation of the scene of a death in medicolegal cases is important, for the evaluation of circumstances of death may be critical in establishing the mode of death—e.g., suicide. The autopsy may not be able, of itself, to determine intent, whereas the scene and the circumstances may provide unmistakable evidence.³ Challenges are usually

faced when such medicolegal autopsies are done at the crime scene despite mortuary in certain circumstances. Mortuary is a controlled set-up for medicolegal autopsy which meets the objectives of autopsy except a few questions relating to manner and circumstances in certain cases. So, problems may be faced when autopsies are done outside the mortuary at the spot of death.

AIM AND OBJECTIVE

The case series aims to identify the challenges faced during autopsy at the crime scene and clarify the objectives of medicolegal questions.

MATERIAL AND METHOD

Three cases of autopsies were conducted at the crime scene, near a jungle of Bhawanipatna town

within two months in October and November 2024, under the requisition by police given to the Department of FMT, SRM Medical College Kalahandi. The Forensic Medicine expert of the Department of FMT SRM MCH proceeded to the spot along with the police and scientific team. All three cases were later compiled to conclude the challenges faced at spot against the traditional autopsy at the mortuary.

CASE SERIES

Three cases of spot autopsies were considered in this series done by Department of FMT, SRM MCH, Kalahandi at a short span of two months. The cases are described under following points.

Features	Case 1	Case 2	Case 3
Distance from the usual autopsy centre	7-8 Km	8-10 Km	6 Km
Location	Jungle area	Outskirt of town	Outside of village
Ease to reach	Very difficult	Difficult	Easy
Support by police	fine	Normal	Fine
Public interference	Moderate	Mild	Nil
Media interference	Moderate	Nil	Nil
Identification	Unidentified	Unidentified	Identified
Autopsy procedure	Complete dissection	Complete dissection	Complete dissection
Evidence collection	Done, scattered out	Done	Done
Crime Scene /Circumstance	Scene preserved, scattered out by carnivores, lonely place,	Scene preserved, intact, lonely place	Scene preserved, intact
Inquest type	Magistrate	Police	Police
Garments	Intact over body and adhered with body fluids	Intact over body	Intact over body

Decomposition	Partly mummified, partly skeletonized	Partially mummified	Partly mummified, partly decomposed with maggots
Sex	Male	Male	Male
Age	17-25 year	22-25 year	70 year
Belongings	Greenish garments	A bicycle, notebooks, chappal	Yellowish shirt and dhoti, chappal intact on foot
Stature	156-158 cm approximately	159-162 cm	164cm
Deformity	Not appreciable, postmortem decapitation	Not appreciable, postmortem decapitation	Nil
External Injury	Not appreciable around neck as eaten away by carnivores	Faint ligature mark present at back side skin tag	Nil
Putrefaction	Internal organs changed to pultaceous mass	Internal organs changed to pultaceous mass	Discolored, soft internal organs
Disease	Not detected	Not detected	Diarrhoea, dehydrated
Internal Injury	Not appreciable	Not appreciable	Nil
Sample Collected	Scalp hair, scattered bones, ligature material, garments, molar tooth, femur bone, skull	Scalp hair, ligature material, garments, molar tooth, skull, muscle for chemical analysis.	Routine viscera for chemical analysis
Method followed	Hanging in a branch of a tree	Hanging in a branch of a tree	Not applicable
Cause of death	Appears to be asphyxia	Appears to be asphyxia	Hypovolemic shock
Manner of Death	Suicidal	Suicidal	Natural
Time Since Death	1-3 weeks	1-2 weeks	3-4 days

DISCUSSION

The challenges faced during conducting the spot autopsy by combining all three cases are-

1. All the cases were done with police requisition with one case of magistrate inquest and proper

police facilitation provided to reach the crime scene. Attendance to the death scene is desirable, whenever possible, attend the death scene after discussion with the police investigators and/or coroner. ⁴

CASE REPORT

2. Proper planning and equipment are required before reaching the scene along with assistants. The guidelines are designed to assist the trainees and the specialists in forensic medicine to improve the quality of work and not to replace professional judgment.⁴

3. A crime scene may not be suitable always to reach, which was found in one case. Outdoor crime scenes are the most difficult to investigate. Exposure to elements such as rain, wind, or heat, as well as animal activity, contaminates the crime scene and leads to the destruction of evidence. Other factors such as not properly securing the crime scene can lead to contamination of evidence.⁵

4. Crime scene preservation is important before reaching the site. The collection of evidence outside the body is of utmost importance before the spot autopsy. Tips to Protect Crime Scene Evidence are

1. Wear double gloves and change the top pair often.
2. Use disposable instruments or clean reusable instruments thoroughly before and after each sample is taken to prevent contamination.
3. Air-dry wet evidence thoroughly before packaging to prevent mould from forming.⁶

5. Public interference and media interference may be a hurdle for quality autopsy which, in this series is found in one case. However, police may take steps to control the situation. The news media should not be allowed access to any area or scene of a death where there is a possibility that evidence

may be damaged, altered, destroyed, or otherwise prejudiced by being published or portrayed. This is generally the responsibility of law enforcement, but MDI professionals should be aware and assist law enforcement with this process as necessary.⁷

6. Circumstantial evidence may be considered before the autopsy proper to conclude the cause and manner. Examples of circumstantial evidence include physical evidence, human behaviour, indirect witness testimony, and scientific evidence. A combination of these forms of evidence is often enough to convict someone.⁸

7. The state of the garments and decomposition features help determine the time since death. The changes brought in by the decomposition are still a hurdle even in this era of the evolution of advanced scientific techniques. Conditions like the existence of differential decomposition in the same cadaver might confuse an inexperienced forensic pathologist.⁹

8. Cause and manner of death could be determined from the Circumstances. Cause of death: natural disease or injury that led to physiologic changes resulting in death, Acute event (e.g., motor vehicle collision, gunshot wound to the head, sudden death in previously healthy individuals), Chronic event (e.g., complications related to atherosclerotic cardiovascular disease, malignancy, etc.). Manner of death: circumstances surrounding death (how the death came about / how the injury or disease leads

to death) mainly based on scene investigation, interviews with next of kin, review of medical history/records, autopsy and ancillary studies (studies (toxicology, histopathology, vitreous chemistry, microbiology, etc.)¹⁰

9. Evidence may be collected for DNA profiling, matching, chemical analysis, HP study etc. All evidence within the physical environment of the crime scene is critically important to the investigative process. At any crime scene, the two greatest challenges to the physical evidence are contamination and loss of continuity.¹¹

10. Identification could be determined by anatomical study, belongings and DNA analysis. The usual reasons for non-identification of the dead body are: no proper history available, the body is often highly decomposed, the face crushed or destroyed, mutilation/dismemberment of body parts either by animals or vultures when disposed of in isolated lonely places or when the bodies are recovered in skeletonized form, etc.¹²

PHOTOGRAPHS

CASE 1

Body reconstructed at the spot before autopsy



Ligature material tied at a branch of tree below which decapitated body found

CASE 2

Decapitated body below a tree with a cycle and a class note book



Ligature material tied at a branch of tree below which decapitated body found

CASE 3

Body found near a village absconded area with a pair of slippers intact over feet



During dissection with signs of decomposition

CONCLUSION

Challenges can be many in spot autopsy but it can be overcome by police patronage, proper planning and execution at the crime scene with a vigilant autopsy.

Funding

None.

Conflict of interest

None.

Informed consent

Not applicable.

Ethical approval

Necessary ethical approval was obtained from the institute ethics committee.

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