Case Reports

ARTEFACTS AND ITS MEDICO-LEGAL PROBLEMS
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Abstract:
In the field of forensic medicine, often medico-legal problems arise due to postmortem Artefacts. Relatives of the deceased and general public often witness and wrongly interpret the external findings (Artefacts) which lead to serious suspicion about cause and manner of death and compel the police to book the case under Sec. 174 (C) CrPC or Sec. 302 IPC. Relatives of deceased put pressure or harass the doctors alleging the case is of murder etc., as doctors are always soft target of public. Medical officers fail to interpret these Artefacts and unwanted suspicion arises. Often such cases are referred to forensic experts for autopsy. Herewith cases that created medicolegal problems due to external Artefacts are reported and the importance of interpretation of these findings and convincing relatives, police, lawyers and the judiciary has been stressed.

Key Words: Post Mortem Artefact, Autopsy, Medicolegal Problem.

Introduction:
Postmortem Artefacts is any alteration or introduction of new features into the cadaver which is physiologically and pathologically unrelated to its natural state and are likely to cause misinterpretations for the investigators or for a layman who is unfamiliar with this phenomenon. It is imperative for the autopsy surgeons to know the various types of Artefacts, so that erroneous conclusions may be avoided which otherwise may lead to the inquest heading in the wrong direction and may lead to miscarriage of justice. ¹

Relatives of the deceased often observe the external findings (artefacts) such as post mortem injuries, discoloration of the body, blood stains etc., and depending on the case suspicion and serious allegation of assault, poisoning, rape and murder etc. may be raised. If the relatives are not explained properly, many times they harass the doctors alleging them to be complacent in their duties and at times assault them as they are soft targets.

The issue gets further complicated because most of the medico-legal autopsies in India are carried by MBBS graduated medical officers without any special training in the field of Forensic Medicine. They are usually ignorant about various postmortem artefacts.

Hence police with their limited infrastructure are constrained to undertake elaborate investigations and at times book suspects under S. 302 IPC etc., all based on misconception/misunderstanding of facts.

Case reports.

Case No. 1
A 26 year old married lady was found hanging in the morning in a closed room, which was secured from inside. She was last seen alive the previous night. There was collection of blood on the floor and her clothes were blood stained (Fig 1.1), which raised serious suspicions of rape and murder. Relatives of deceased suspected foul play and forced police to register a case under S.174 (3) Cr P C. The body was taken to the nearby primary
health center where medical officers failed to interpret the injuries and referred to Forensic Medicine experts suspecting a case of rape and murder.

During the postmortem examination there was the presence of irregular, serpiginous, scalloped areas of superficial skin loss, and small punctate and scratch-type lesions around the lining of her undergarments, and lower limbs. Some red ants were still crawling over the body. Thus it was concluded that the bleeding was the result of postmortem ant bites which were limited to the lining of the undergarment because of the presence of firm elastic bands lining it which limited the entry of ants further into the perineal area. Since the body was in the state of suspension for 6-8 hours, the resultant pooling of blood aggravated the Postmortem blood loss.

**Case No. 2**

Deceased, a young adult male, was last seen alive with his friends and was retrieved from the lake and sent to the mortuary with an alleged history of strangulation. When it was retrieved the relatives of the deceased who saw the dead body noticed presence of some injury marks on the neck which resembled a ligature mark and also an incised wound. Thus serious suspicion of foul play was raised. However, during medicolegal autopsy the body showed unequivocal features of ante-mortem drowning with the presence of pseudo-strangulation ligature mark due to skin fold and superficial lacerated post-mortem wound of size 1 x 0.5 x...
0.4 cms over the front of the mid-line of the neck, with irregular pale margins caused by aquatic animal. Postmortem bone deep lacerated wound was also found on the right hand.

Case No. 3  
The Deceased found hanging in a closed room in lying down position over ground with slightly raised upper half of the body and ligature material tied at the window. Relatives of body noticed discoloration (darkening) over face, front of chest and abdomen and alleged it as a case of poisoning and murder. With great difficulty it was explained to them that the darkening of the body was due to the postmortem staining over dependent parts like face, chest, abdomen and both upper limbs.

Case No. 4

Deceased young adult male found hanging from a tree in the outdoor field. His pant and shirt was blood stained. Deceased relatives alleged it as a case of murder and a case was booked under S-174 (C) Cr P C. The police referred the case to the medical officer who failed to interpret the injuries and referred to forensic experts. Ant bite lesions were found over both lower limbs with the trickling of blood downwards staining pants. Discrete postmortem abrasions (Fig. 4.1) due to ant bites were found over front of chest and abdomen and all over back. Ant bite injury were also noted over external auditory canal leading to oozing blood (Fig. 4.2).

Discussion:  
Often medical officers fail to interpret postmortem changes after death or postmortem injuries by ants, rodents, aquatic animals etc. and suspect it as a case of assault and refer to
forensic experts. Relatives put pressure on these medical officers claiming the death was of a suspicious nature. Medical officers in order to avoid unnecessary problems being created by relatives of deceased, refer the case to forensic experts. Police officers also fail to interpret these findings and sometimes it is difficult to convince them too. Few types of Artefacts are discussed below.

The Postmortem ecchymoses otherwise called ‘vibices’ are tiny spots, at time round to oval bluish-black hemorrhages limited to dependant parts of body. It is the result of rupture of subcutaneous capillaries and smaller venules due to increased intravascular pressure from pooling of blood. This feature can again be mistaken for bruises.

Patchy Lividity over neck and face, medial side of thighs, occiput area were misinterpreted as bruises and misdiagnosed as strangulation, sexual assault and blunt trauma to head respectively. Once rigor mortis sets in, the superficial venous blood cannot drain into deeper venous system so it appears as patchy lividity over upper chest and neck, which is often misinterpreted as contusions of throttling. In the cases of hanging described in this case report, lividity over the palms and the medial side of the thighs were misinterpreted as bruises and suspected cases that of assault, rape and murder.

Darkening of body due to well developed lividity created suspicion of poisoning in the case of partial hanging discussed in this case report, as people think poisoning changes the color of body.

Sometimes in hanging cases there may be postmortem bleeding from the anus if deceased had hemorrhoids and the suspension duration is long. Gravitational forces due to the upright position of the body facilitates post-mortem per-rectal bleeding from the ulcerated haemorrhoids. Same mechanism is responsible for oozing of blood from healing wound over great toe and rodent bite over great toe in cases of hanging discussed here.

Decomposition of body is responsible for perhaps the most common and the most significant of artefacts. Neck skin fold in early decomposed body of drowning case appears as ligature mark confused for ligature strangulation (pseudo-strangulation).

Aquatic animals fish, crab, etc., feed on drowned dead bodies especially eyes lids, ala of nose, lips, ears, scrotum etc. Margins are irregular (nibbled) and pale. Head down position in drowning case facilitates post-mortem congestion of head, face and neck and injuries over these region bleed.

In above mentioned cases postmortem laceration over front of neck and pseudo-stragulation mark led to suspicion of murder.

Postmortem injuries by rodents are present over exposed and unprotected and moist parts of body such as eyelids, nose, and mouth. Injuries appear as circular, crater like hollow defects. Margins were irregular, finely scalloped and serrated. Edges show protruding indentations up to 5 mm and focal distinct parallel cutaneous lacerations.

Bite marks by ants can cause many irregular, serpiginous, scalloped areas of superficial skin loss, and small punctate and scratch-type lesions may be often observed in the body. Usually ant injuries are orange-pink to yellow in color and diffusely scattered over the skin surface. These injuries consist of small and rather shallow gnawed holes that can be easily misinterpreted as antemortem abrasions or resulting from strong acids. No bleeding is associated with such skin lesions but sometimes considerable hemorrhage can take place, especially where removal of superficial layers of the skin occurs in congested parts of the body. On histopathological examination signs of vital reaction are not found.

In the three cases of hanging discussed here, ant bite injuries and blood oozed from these injuries were misinterpreted as antemortem injuries and suspicion of these cases being that of assault, rape and murder was raised.
Ignorance of knowledge of artefacts leads to:
   a. Wrong interpretation of cause of death.
   b. Wrong interpretation of manner of death.
   c. Wrong interpretation about time since death.
   d. Undue suspicion of criminal offense
   e. A halt in investigation of criminal death
   f. Wastage of time and effort as a result of misleading findings
It ultimately leads to miscarriage of justice.\(^9\)

**Problems faced by forensic experts due to Artefacts:**

- Relatives of deceased create law and order problem.
- Relatives in huge numbers often put undue pressure on forensic experts.
- Difficult to explain layman and convince the relatives of deceased.
- Relatives of deceased threaten forensic experts by not receiving the deceased body or keeping body in front of the hospital and protesting.
- Many a time ill-informed media might spread false information due to misinterpretation.
- Lawyers may file a case in court due to false interpretation by seeing photographs and alleging involvement of experts for illegal gain.

**Remedy for avoiding medicolegal problems by Artefacts.**

- Conducting meticulous autopsy.
- Preserving viscera for FSL and other ancillary investigations such as histopathology etc.
- Photography or Video recording of the autopsy should be done.
- Detailed description of antemortem and postmortem injuries.
- Good communication and convincing relatives may help sometimes.
- Train medical officers periodically.
- Compulsory rotatory internship postings for interns in department of Forensic Medicine.
- In case of doubt, don’t hesitate to take the opinion of senior colleagues.

**Conclusion:**
Post mortem artefacts are common phenomena in forensic practice. Medicolegal problems arising from these artefacts should be dealt with by performing a meticulous autopsy in every case along with ancillary investigations and photography. Ultimately being a forensic expert one should develop the public relations skills as most of these misunderstandings can be dealt effectively by taking the relatives of the deceased into confidence by explaining the case to them objectively.

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