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Vehicular Dragging Death: A Case Report

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ABSTRACT

This case highlights the forensic importance of identifying injuries in cases of prolonged vehicular dragging. A 27-year-old male motorcyclist died after being trapped under a speeding limousine and dragged for nearly 11 km. The Re-postmortem revealed extensive abraded lacerations, deep soft tissue loss, and exposed bones with characteristics of “grinding/friction” injuries. Vital reaction was found in wounds over the body. Internal findings showed craniocerebral injuries and long bone fractures. These injury patterns helped to reconstruct the incident as a possible manslaughter or homicide. This case highlights the medicolegal significance of re-postmortem examination in clarifying manner of death in complex vehicular dragging incidents.

Introduction

Vehicular collisions involving vulnerable road users, especially motorcyclists, pose significant forensic challenges when injuries result from prolonged contact with rough road surfaces. Forensic investigation of vehicular dragging deaths requires systematic analysis of injury patterns, along with proper history from the investigative agencies and relatives to reconstruct the sequence of events and determine the cause and manner of death [1, 2]. When a victim gets trapped beneath a moving vehicle and is dragged over long distances, characteristic “friction” or “grinding” injuries develop, causing extensive damage to skin, soft tissues and bones [3]. These injury patterns offer valuable insights into the mechanism, severity, and timing of trauma for reconstructing the sequence of events and assisting the courts in determining the cause of death, thus ensuring delivery of justice [4].

Case History

A 27-year-old man was riding a motorcycle on a highway outside Surat at night when he was hit by a speeding limousine at a speed breaker. He fell from his bike, and his left leg was trapped in the rear wheel axle. The body of the victim was dragged for nearly 11 kilometres in a supine position before it was finally dislodged. Initially, the post-mortem was conducted at a Primary Health Centre, and it was treated as a case of a road traffic accident. However, the allegations from his relatives necessitated a thorough re-postmortem to determine the exact cause and manner of death.

Autopsy Findings

External Examination

The scalp exhibited extensive abraded lacerations with

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underlying bone exposure, and the occipital region showed a 6 × 4 cm full-thickness bony defect with irregular margins, exposing brain tissue and heaped wound margins at its upper end (Figure 1). A 33 × 15 cm, reddishblack, bone deep abraded laceration, present vertically, over the back of right chest. Tissue tags in the upper scapular region indicated the direction of force from caudaltocranial (Figure 2). Upper limb injuries included a 48 × 7 cm graze abrasion over the posterior aspect of the right arm with medial epicondyle exposure, and target-like abrasions with bone involvement over the back of the left elbow (Figure 3) and dorsal knuckles (Figure 4). Lower limb injuries consisted of a 70 × 17 cm abraded laceration involving the right thigh, gluteal region

and knee, exposing femur, sacrum, and ilium. (Figure 5), along with a 6 × 5 cm oval graze abrasion over the plantar surface of the left heel exposing the calcaneum, with skin heaping over upper end suggestive of a direction of force from below upwards (Figure 6) and a 6 x 3 cm contused lacerated wound present on the anterior surface of the right leg, 9 cm below knee joint with underlying displaced fracture of upper one-third tibia bone. A pale, dry yellow colour postmortem abrasion measuring 74 × 19 cm was present on the anterior aspect of the body, extending from the left mandibular angle over the front of the neck, chest, and abdomen up to the left upper thigh (Figure 7).



Figure 1: Back of skull with exposed brain matter



Figure 2: Dragging injuries on back



Figure 3: Target-like wound on dorsal surface of left elbow



Figure 4: Target-like abrasions on knuckles



Figure 5: Extensive bone grinding injury of femur and pelvis



Figure 6: Left heel injury along with the skin tags



Figure 7: Dry, yellow postmortem abrasion

Internal Examination

Cranial cavity examination revealed disruption of cranial bones and exposure of brain matter. There were no significant thoraco-abdominal injuries. There were bone grinding injuries involving the skull, ribs, scapula, pelvic bones and long bones, along with a displaced fracture of tibia bone.

Discussion

This is a typical case of vehicular dragging death in which the distribution and severity of injuries paint a clear picture of events. The extensive lacerations, graze abrasions, bone grinding injuries strongly support the diagnosis of prolonged dragging trauma.

The sequence begins with the initial car impact, followed by entrapment and then prolonged dragging. Directional features such as tissue tags and changes at the wound margins indicate the direction of dragging, which was from caudal to cranial.

The abrasions with active bleeding and inflammation suggest that the victim was alive after impact. The presence of a dry postmortem abrasion on the anterior surface, despite supine dragging, may be explained by secondary overturning or rolling of the body during terminal dragging, or subsequent friction after death. The consciousness of the victim during the dragging or precise timing of death in dragging death cases is very hard to determine with absolute certainty solely based on autopsy observations. Forensic experts thus must correlate postmortem observations with police statements, eyewitness testimony, and other circumstantial evidence [5,6,7].

The re-postmortem examination, conducted on official requisition, revealed additional bone grinding injuries and tissue tags that were not documented during the initial autopsy. These new findings necessitated a revised interpretation of the manner of death—from accidental to possible homicidal. The re-postmortem provided a detailed evaluation of injuries, clarified the sequence of events, and reinforced the forensic value of repeat autopsies in contested cases. Such re-evaluations, though not determinative of legal guilt, assist the courts in approaching justice that might otherwise be obscured.

Conclusion

This case emphasises the value of meticulous medico-legal and forensic evaluation in vehicular trauma, particularly in prolonged dragging incidents. Detailed documentation and re-postmortem examination facilitated reclassification of the incident from a presumed accidental death to a possible

homicidal dragging. While the ultimate legal decision lies with the courts, forensic experts play a vital role in objectively interpreting injuries and assisting the administration of justice.

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Competing Interest Declaration

The author declares that there are no competing interests.

Author Contributions

All Authors conceptualized and conducted the medico-legal autopsy, analyzed the findings, reviewed relevant literature, and prepared the manuscript. The authors have read and approved the final manuscript.

Data Availability Statement

All data generated or analyzed during this study are included in this published article.

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