

Corridor Roof Causing Almost Decapitation: a Rare Case Report

Deshkar J^{1*}, Mittal S², Naik K Sh²

¹Department of Internal Medicine, Pacific Medical College and Hospital, Udaipur, India

²Department of Forensic Medicine and Toxicology, Lady Hardinge Medical College, New Delhi, India

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ABSTRACT

Background: Cut throat injury can be homicidal, suicidal or accidental in manner. However, in the absence of tentative cuts, deep cut throat injury usually raised suspicion towards homicide, even against the circumstantial history provided by close relatives or eye witness. Decapitation or almost decapitation is usually noticed in homicidal assault using any heavy cutting weapon like sword and axe or in suicidal railway injury.

Case Report: A 91-years old, otherwise healthy lady (empress of one high profile Company) died due to almost decapitation as a result of accidental fall of wheel chair and trapping of neck underneath roof of corridor while moving up in an elevator (lift). With suspicion of property dispute, the investigating police agency was not ready to accept it as a case of accident till the neck injury was clarified demonstrating associated injuries during autopsy and later during visit to scene of death.

Conclusion: In high profile case, video recording of autopsy findings, even if not mandatory as per the law, should be made to remain in safer side. Although police should not be allowed during conduction of autopsy, it will be healthy practice to clarify any doubts then and there over autopsy table, if the case warrants so.

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► *Implication for health policy/practice/research/medical education:* Corridor Roof Causing Almost Decapitation

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1. Introduction:

Lacerations differ from incised wounds in that the continuity of the tissues is disrupted by tearing rather than clean slicing, but the distinction is blurred (1). Cut laceration is resulted from cutting action of a weapon

which is not very sharp (2). Wounds caused by a blunt heavy cutting weapon such as an axe are often lacerated than incised wounds (3). On the other hand wounds produced by pieces of glass, broken crockery have the characteristics of incised wound (4). On both occasions, blurred features of these wounds can put the investigating agency and forensic pathologist in dilemma while deciding exact causative agent or weapon. Depth of the cut throat injury depends upon the sharpness and weight of the weapon as well as degree of force used. In the absence of tentative cuts, deep cut throat injury usually raised

Corresponding author: Deshkar J, MD. Associate Professor, Forensic Medicine, Pacific Medical College and Hospital, Pratapura, Udaipur, Rajasthan, India.

E-mail: jayashreedeshkar@gmail.com

suspicion towards homicide (1-4). Antemortem decapitation must be considered highly indicative of homicide.⁵ Suicidal decapitations caused by railway injury are soiled by grease, rust and dirt etc (1). Accidental decapitation is rare, and very few cases are cited in the literature (5, 6). But whether a cement structure .i.e., roof of corridor can cause almost decapitation?

2. Case Report:

Alleged History

A 91-years old female (Empress of a reputed large company) was brought for autopsy with alleged history of sustaining neck injuries while accidentally struck her neck against margin of roof the corridor while moving up in the lift being sat over a wheel chair. Later she was shifted to hospital where she was declared brought dead.

External Autopsy Findings

Aged otherwise healthy lady with Fair complexion, Average Body built, Body Length was 160cm, and her body weight was 65Kg. Scalp hairs grey, loose, 20-25 cm long. Eyes was Closed, cornea hazy, pupils dilated. Mouth closed, tongue protruded and bitten by teeth, teeth intact. Rigor mortis present in both upper and lower limbs. PM lividity faintly marked on the back aspect of the body except over pressure points. Cyanosis absent, natural orifices intact, putrefaction not developed till yet.

External Injuries

1. Multiple abrasions, contusions and, lacerated abrasions of subcutaneous tissue to muscle deep of varying shapes and sizes situated on and nearby chin (Figure 1).

2. Cut lacerated wound of size 16cm×14cm × spinal cord deep situated transversely on the front of neck, 4cm above the sternal notch and 4.5 cm below the ear lobules on both sides. Margins of the wound are found irregular at places. Carotid arteries and jugular veins on both antero-lateral aspects of neck, trachea and esophagus on the front of neck along with nerves are found severed and crushed at the mid-cervical region. 4th and 5th cervical vertebrae are found severed and crushed along with spinal cord at that level (Figure 2).



Fig. 1. Picture is showing multiple associated injuries on and nearby chin.



Fig. 2. Picture is showing deep neck wound causing almost decapitation.

3. Multiple abraded lacerations of sizes varying from 0.5 cm X 0.5 cm to 1.5 cm X 1 cm of subcutaneous to muscle deep situated on the midline of front of chest with extension of curved abrasions of size 3 cm X 0.3 cm each along inferior medial margins of both breasts.

4. Multiple small contusions situated on the dorsal aspects of proximal interphalangeal joints of left hand.



Fig. 3. Picture is showing the alleged lift.



Fig. 1. Picture is showing the offending margin of roof of the corridor.

5. Pressure abrasion of size 17cm×6cm situated on the extensor aspect of left forearm.

6. Contusion of size 16cm×2cm situated transversely on the back of mid part of shoulder region just below 7th cervical spine.

7. Contusion of size 5 cm X 3 cm situated on the right gluteal region adjacent to anal cleft.

Internal Autopsy Findings

Scalp and skull are intact. Meninges and brain are found intact and pale. 4th and 5th cervical vertebrae are found severed and crushed along with complete transection of the spinal cord at that level. Larynx is crushed. Esophagus and trachea are found severed and crushed below the cricoid cartilage. Neck muscles are found severed and crushed corresponding to external injury No-6. Hyoid bone is intact. Left side 2nd to 3rd and right side 2nd to 6th ribs are found fractured along anterior axillary lines. Heart is enlarged weighing 470 grams, left coronary ostia shows 70% narrowing whereas right coronary ostia shows 50% narrowing. All the coronary arteries are found thickened, calcified, but patent. Both sides' chambers of heart are almost empty. Large blood vessels show atherosclerotic changes. Stomach is intact, contains about 100 ml of gruel like food materials without emitting any characteristic odour. Liver is intact and pale. Spleen is intact and contracted. Both Kidneys are intact and pale. One cyst of 1 cm diameter containing straw colour fluid is found on the anterior surface Left kidney.

Visit of Scene of Incident

The alleged lift was exclusively designed for the deceased for travelling in between ground and first floor of the building having maximum capacity for two people. It can be operated both from inside or from outside. To move upwards, either one have to operate from inside the cabin of lift or by closing the small gate outside, then to switch on the button on the first floor. Similarly to move downwards, either one have to operate from inside the cabin of lift or by closing the small gate outside, then to switch on the button on the ground floor. The elevator can move upwards or downwards even if glass doors of the cabin of the lift are open (Figure 3). The offending roof of corridor having angled margin is very adjacent to the lift (Figure 4).

Opinion

Death was due to hemorrhage and shock following severing of major blood vessels of neck possibly by the alleged accidental manner. All the injuries were ante-mortem in nature and fresh in duration. Blood sample of the deceased was preserved within properly labeled, sealed and duly signed paper packet for necessary test and comparison with blood sample/stain found at the scene of death and alleged lift. Time since death was about within 6 to 12 hours prior to the time of conducting autopsy.

3. Discussion:

Incised wounds of the neck can be accidental, homicidal or suicidal in nature (7) whereas lacerated wounds can be either accidental or homicidal, but rarely suicidal in nature (8, 9). In the present case fatal injury was a deep cut laceration causing almost decapitation. As the wound has mixed features of both incised wound and lacerated wound, for the investigating agency it was very difficult to ascertain the exact nature of causative agent and rely on the history supplied by the eye witness.

Neck is the target site for cut throat injury and asphyxia deaths by constriction. As most of the vital structures lie on the anterior compartment, both homicidal and suicidal injuries are seen on the anterior aspect of neck.¹⁰ In the present case, the injury was

present on the mid part of front of neck involving all the vital structures including the spinal cord. History supplied by the police and relatives can be true, false or misleading at all.

Hence, forensic expert rarely blinded from circumstantial history. In the present case, the entire investigating team unable to digest the circumstantial history supplied by the eye witness, because of nature of the injury found on neck of the deceased, as well as due to suspicion of enmity among children and grandchildren of very rich person.

In the present case, the neck wound was too deep, lying horizontally with no hesitation cuts. Therefore, excluded suicide but raised suspicion of homicide. However, correlation of other blunt injuries present just adjacent to the neck injury, it could be substantiated as a case of accidental injury. Sharpness of weapon depends upon the hardness, thinness and regularity of its margin (10, 11). Even in case of railway injury decapitation of head or complete transection the trunk occurs as a result of heavy weight and grinding force of railway wheels even those are totally blunt. However, abrasion collars are characteristics of such railway injuries.

In the present case, almost decapitation occurs due to repeat strokes of the neck against the margin of roof of the corridor, powered by huge upwards force of the lift. Blunt force injuries were evident close to the neck injury. Penetrating neck wounds can cause injury to one or more of the major organ system of the neck, including the great vessels, larynx and trachea, esophagus, and spinal column. Injuries to the vascular system occur in 25-56% of penetrating neck wounds, and injuries to carotid and subclavian arteries are the most common cause of mortality (12).

In middle cervical injury, the common carotid artery is the most vulnerable vessel, although other large vessels such as the external and internal carotid arteries as well as the internal jugular vein may be involved, often causing neurological deficits and shock (13). In the present case, all the vital structures of the neck including major blood vessels, trachea and spinal cord are transected. Therefore, cause of death would

have been attributed to haemorrhage and shock, cerebral ischemia, asphyxia or spinal shock.

However, considering order of transection of vital structures, paleness of internal organs and absence of asphyxia signs, cause of death was attributed to haemorrhage and shock. As per NHRC guidelines and Supreme Court of India's order, all custodial deaths and all autopsies conducted by medical board must be properly video-graphed. But there is no bar for video-recording in other cases (14-18). In the present case, videography of entire autopsy was done only for transparency and to silent any controversy later on. As per the basic rules of autopsy, no police or any relative of the deceased should remain present inside the autopsy hall while conducting autopsy. However, in the present case, multiple senior police officers linked to the suspicious death were welcomed inside the autopsy hall, just to clarify the manner of death with supportive findings then and there so that doubt in future and media trial can be avoided.

4. Conclusion:

In case of high profile case, it is always better to have videography of autopsy, even if not mandatory as per the law, just to remain in safe side. Although police should not be allowed during conduction of autopsy, it will be healthy practice to clarify any doubts then and there over autopsy table, if the case warrants so.

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