



## Accidental Ligature Strangulation Due to Sugarcane Crusher

Ruchir Sharma<sup>1</sup>, S.K. Dhattarwal<sup>1</sup>, Vijay Pal Khanagwal<sup>1</sup> and Kuldeep Panchal<sup>2</sup>

<sup>1</sup>Department of Forensic Medicine, PGIMS Rohtak.

<sup>2</sup>Department of Forensic Medicine, Lady Harding Medical College.

### ARTICLE INFO

#### Article history:

Received: 31 March 2015;

Received in revised form:

19 May 2015;

Accepted: 27 May 2015;

#### Keywords

Strangulation,  
Ligature,  
Accidental,  
Death.

#### ABSTRACT

Strangulation is a form of violent asphyxial death and majority of cases are homicidal in nature. This report illustrates an unusual cause of accidental strangulation death of 44 years old female caused due to chunni (a piece of cloth worn around the neck by most Indian women) being caught in moving sugarcane crusher. She was immediately taken to the emergency department of PGIMS Rohtak, where a few hours later she was declared dead, despite all the resuscitation and IVF/drugs. In summary, this case exemplifies the unsuspected inherent danger of wearing long scarf (chunni) while working with machinery.

© 2015 Elixir All rights reserved.

#### Introduction

Strangulation is a form of violent asphyxial death and usually associated with homicide. However, few cases of accidental strangulation are also found<sup>1</sup>. This report illustrates an unusual cause of death in accidental strangulation caused due to long scarf.

#### Case Report

This paper present a case of a female aged 44 years who while working near a sugarcane crusher gets strangulated accidentally due to entrapment of long scarf end in moving crusher. She was admitted on 08.07.2012 at 11:45 am in emergency department of PGIMS Rohtak despite all the resuscitation and IVF/drugs. Pt expired on 08.07.2012 at 2:45 pm. The postmortem examination was done in the morning of next day. On examination A bony deep lacerated wound of scalp was present over whole of right side of scalp frontal, right parietal, right temporal, right occipital region were found to be missing. The margin of wound was irregular. Underlying half of right side of skull was exposed with showing multiple 20-22 linear, parallel and placed horizontal scratch manic over outer table of right parieto-temporal region.

The right ear was also missing exposing the underlying right external auditory meatus. The margin of whole wound show zig zag irregularity. The temporal bone show a hole of size 2\*1 cm with multiple radiation surrounding it, piercing both inner as well as outer table of bone along with underlying duramater. On dissection of skull, a puncture wound was found over temporal region of brain up to depth of 2.5 cm with size 1\*1 cm. The puncture wound was found to be ecchymosed and filled with blood.

A reddish ligature mark just over the level of thyroid cartilage width of length 25 cm placed horizontally over the front of neck just over the level of thyroid cartilage with width of 1 cm. The mark was placed horizontally situated below 5 cm below centre of chin, 4 cm below right angle of mandible 4 cm below left angle of mandible and ends just below right angle of mandible and left on left side, it ends below the left mastoid process on dissection underlying structure were ecchymosed i.e

laryngo-tracheal structure and hyoid bone was intact an intima of carotid artery show tear at places.

Opinion the cause of death in the case is Cranio-Cerebral injury coupled with asphyxia as a result of accidental strangulation. All injuries are ante mortem in nature and recent in duration and appear to be accidental in manner.



#### Discussion

In one such case which got public attention when the famous dancer Isadora Duncan died in September 14, 1929 in the long scarf, which she was wearing, became caught in the wheels of Bugatti car and she died at the scene<sup>2</sup>.

Accidents occur when the scarf's free floating end becomes entangled in moving wheel; the unprotected spokes of wheel traps the scarf (Chunni, oodhani) worn by females<sup>3</sup>, such long scarf (Chunni, oodhani) worn by Indian women resulted in number of cases of accidental strangulation with loss of life. The scarves are 6-12 feet in length and are slackly wrapped about the neck with their ends flowing freely<sup>4</sup>. In spite of being more mobile but less stable than the thoracic and lumbar regions of vertebral column, cervical spine injuries are rare in strangulation<sup>5</sup>. However, application of considerable force may cause fracture-dislocation of this vulnerable region. In the reported case, injury to neck occurs due to entrapment of one end of long scarf round the neck and other trapped in sugarcane

crusher. The recognized mechanism of injury includes entrapment of long scarf round the neck and the victim was unconscious which means bilateral carotid arteries are occluded. Vertebral circulation was insufficient to maintain cortical function and Cranio-Cerebral injury occur due to crushing under sugarcane crusher.

In summary, this case exemplifies the unsuspected inherent danger of wearing long scarf while working with machinery.

#### **References**

1. Bardale R, Dixit P, MD Fatal Long Scarf Syndrome: A Case Report of unusual cause of death. *Journal of Forensic Medicine, Science and Law.* 2011;20:34-6.
2. Gowens PA, Davenport RJ, Kerr J, Sanderson RJ, Marsden AK. Survival from accidental strangulation from a scarf

resulting in laryngeal rupture and carotid artery stenosis: the "Isadora Duncan syndrome". A case report and review of literature. *EmergMed J* 2003; 20: 391-3.

3. Habal MB, Meguid MM, Murray JE. The long scarf syndrome- A potentially fatal and preventable hazard. *JAMA* 1972; 221: 1269-70.

4. Meguid MM, Gifford GH Jr. The long free-flow scarf. *Pediatrics* 1972; 49: 290-93.

5. Kiani SH, Simes DC. Delayed bilateral internal carotid artery thrombosis following accidental strangulation. *Br J Anaesth* 2000; 84: 521-4.