#### **Case Report**

# FATAL LONG SCARF SYNDROME: A CASE REPORT OF UNUSUAL CAUSE OF DEATH

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### Abstract:

Long scarf worn by Indian women resulted in number of cases of accidental strangulation with loss of life. This report illustrates an unusual cause of death in accidental strangulation caused due to long scarf. Strangulation by long scarf is caused as a consequence of scarf being caught in the wheel spokes of a vehicle.

**Key words**: strangulation, cervical spine, accident, fracture, death

#### **Introduction:**

Strangulation is a form of violent asphyxial death and majority of cases are homicidal in nature. However, few cases of accidental strangulation have been reported in literature (1, 2). Death in these cases is due to asphyxia, cerebral anoxia or vagal inhibition. This report illustrates an unusual cause of death in accidental strangulation caused due to long scarf.

## Case report:

A 13-year old female was brought for forensic autopsy at Govt. Medical College and Hospital, Nagpur with history of accidental strangulation. The deceased was wearing a long oodhani (scarf) and was traveling in bullock-cart. She was standing by the side panel of cart close to wheel. Her oodhani get entrapped into wheel while cart was speedily rolling on sliding route. The lady was transferred to a private hospital where she was found to be quadriplegic. The patient survives for a day.

At autopsy, external examination reveals ligature mark on the left anterio-lateral part of neck, extending over nape and right aspect of face, of 20 cm in length and 6 cm in width (fig 1). Internal examination showed pale brain, hematoma in upper intercostal spaces, and signs of aspiration pneumonitis. Neck showed hemorrhagic infiltration in muscles. There was separation of C4-C5 joint with complete transaction of spinal cord at corresponding level (fig 2).

#### **Discussion:**

Strangulation by long scarf is caused as a consequence of scarf being caught in the wheel spokes of a vehicle. This condition got public attention when the famous dancer Isadora Duncan died in September 14, 1929. The long scarf, which she was wearing,

became caught in the wheels of Buggati car. Isadora died at the scene (3). Subsequently, cases related to scarf have been reported (4, 5) and being labeled as "long scarf syndrome" or "Isadora Duncan syndrome".



Figure 1: showing ligature mark over neck



Figure 2: showing complete transection of spinal cord (white arrow)

Long scarf (Chunni, oodhani) worn by Indian women resulted in number of cases of accidental strangulation with loss of life. 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 (5). The scarves are 6-12 feet in length and are slackly wrapped about the neck with their ends flowing freely (6).

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 (7). 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 oodhani round the neck and other trapped in wheel. The recognized mechanism of injury includes entrapment of oodhani round the neck and face with cervical hyperextension and axial rotation resulting in separation of cervical vertebrae (8).

Cart powered by bullocks are prevalent mode of transport in rural India. The occupant sitting close to wheels is always in danger especially if wearing long scarf. This is rare but unfortunate mishap occurred due to bullock cart. Similar cases have been reported in India with

other mode of traveling like cycle rickshaws (1, 2). These incidents raise the need for preventive measures to be introduced or followed to avoid further occurrence.

In summary, this case exemplifies the unsuspected inherent danger of wearing long scarf while traveling in a vehicle with unprotected wheels.

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