

CASE REPORT

Variant of Isodora Duncan Syndrome

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ABSTRACT

Developing countries like India often have regional peculiarities quite different from the western countries. The stole (dhupatta) worn by ladies in the sub-continent have higher risk to get entwined in the moving wheels of the vehicle while they are travelling. The free end of the stole might just prove to be fatal enough to end one's life. This condition got public attention when the famous dancer Isodora Duncan died on September 14th, 1929. Here we report one such case, wherein a pillion rider while she was travelling in a two-wheeler ended her life when her stole (dhupatta) got entwined in the wheels of the two-wheeler in which she was travelling.

Key Words: Isodora Duncan Syndrome Stole (Dhupatta), Sub-continent, Two-wheeler.

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INTRODUCTION

A dupatta (stole) is a long cotton or nylon scarf worn by women in the Indian subcontinent. The middle part goes in front of the woman's chest, and both ends go back over her shoulders and hang loosely at the back¹. The long loose ends of a dupatta, long scarf, saree (another traditional Indian garment), chunni (a scarf similar to the dupatta), or long skirt may get entangled in moving wheels or machinery and cause trauma to a body part¹. Strangulation by long scarf is caused as a consequence of scarf being caught in the wheel spokes of a vehicle. The free end of the stole might just prove to be fatal enough to end one's life. This condition got public attention when the famous dancer Isodora Duncan died on September 14th, 1929. The long scarf, which she was wearing, became caught in the wheels of Bugatti car. Subsequently, cases related to scarf have been reported and labeled as 'long scarf syndrome' or 'Isodora Duncan syndrome'².

CASE DETAILS

A middle-aged female was brought to the autopsy by XYZ Police Station to Department of Forensic Medicine and Toxicology, SIMS and RC, Bengaluru on 9th June 2013, with alleged history of self-fall of a pillion rider from a two-wheeler on the way to home. The pillion rider while travelling in two-wheeler suddenly fell down on the road due to entwined stole (dhupatta) to the rear wheel of the vehicle. She was immediately rushed to the hospital from the injury site. In the casualty it was recorded as 'Brought Dead'.

AUTOPSY FINDINGS

A middle-aged female on external examination was wearing a chudidhar along with a dhupatta. The dhupatta showed multiple tears along with grease stains (**Figure 1**).



Figure 1 Dhupatta showing multiple tears

EXTERNAL INJURIES

- I. An oblique incomplete abrasion (**Figure 2**) measuring 30cm × 1.5cm present over front, left side & back of upper part of neck, situated 8cm below the mid-point of chin, 7cm below the left ear lobule, 3cm below the hair line at the back of the neck.



Figure 2 Oblique incomplete abrasion

2. Laceration measuring 4cm × 2cm × scalp tissue deep present over back of head in the right occipital region, situated 7cm behind the right ear.
3. Abrasion measuring 4cm × 3cm present over back of right elbow region. Abrasion measuring 2cm × 1cm present over back of right wrist region.

Abrasions were bright red in color. All injuries were ante mortem in nature and fresh.

Internal injuries

- i. **Chest and Abdomen Walls and Cavities:** 4th to 9th Ribs on the right side were fractured in the anterior axillary line. Pleural cavity contained 500ml of blood.
- ii. **Cardiovascular system:** Heart was normal in size, coronaries were patent.
- iii. **Respiratory System:** Both lungs were edematous and pale. C/S exuded minimal blood.
- iv. **Digestive System:** Stomach contained 200ml of yellow coloured partially digested rice meals. No unusual smell. Normal mucosa. Intestines contain gas and its contents.
- v. **Hepatobiliary System:** Liver parenchyma was normal.
- vi. **Reticuloendothelial System:** Normal
- vii. **Urogenital System:** Bladder was empty. Uterus was normal in size. Cavity empty.
- viii. **Endocrine Organs:** Intact.
- ix. **Head:** On reflection of scalp, extravasation of blood over an area of 5cm × 4cm present over right parieto-occipital region (**Figure 3**). Comminuted fracture measuring 7cm × 5cm present over the right parietal region (**Figure 4**). Fissured fracture measuring 6cm present over the left middle cranial fossa. Fracture end shows extravasation of blood. Brain is intact and congested. Diffuse sub-dural and sub-arachnoid hemorrhage present all over.
- x. **Neck and Pharynx:** Intact.
- xi. **Spinal Column and Cord:** Intact.



Figure 3 Extravasation of blood in scalp.



Figure 4 Shows fracture in skull

Cause-of-death statement: Cause of death was opined, as shock and hemorrhage as a result of head injury sustained consequent upon fall from two-wheeler due to entwining of dhupatta to the rear wheel of the vehicle.

DISCUSSION

The long loose end of the dhupatta, long scarf, saree or long skirt may get entwined in moving two wheelers while travelling. 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 females³. The scarves are 6-12 feet in length and are slackly wrapped about the neck with their ends flowing freely⁴. Cases have been documented where the clothes worn by the person had proved to be fatal when they are travelling in a two-wheeler or an auto rickshaw. The first written case report of accidental strangulation in an adult was the world famous dancer Isadora Duncan who died on 14th September 1929 the long scarf, which she was wearing, became caught in the wire wheels of her Buggati car, stopping the vehicle. Isadora died at the spot and was later found to have sustained a fractured larynx on a carotid artery injury⁵. Aggrawal N K et al, Kohli, document cases A, Verma S K^{6,7}. Rajesh M et al., reported a case of fatal long scarf syndrome: a case report of unusual cause of death⁸. Zine KU et al., reported a case of Accidental Ligature Strangulation with Avulsion of Scalp⁹.

CONCLUSION

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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Contribution of authors: We declare that the authors named in this article did this work and all liabilities pertaining to claims relating to the content of this article will be borne by the authors. Myself, Dr. Yadukul S, did this case. Along with me, Dr. Shiva Kumar BC and Dr. Udayashankar BS helped in taking the photographs, analyzed the case in detail along with other relevant studies done in this regard.

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