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## LONG SCARF INJURIES

Arshad A. Siddiqui, Muhammad Shahzad Shamim,\* Rashid Jooma\* and Syed Ather Enam\*

## ABSTRACT

Long scarf (*Dopatta*) traditionally worn by females in South-East Asia have been described to make the females prone to sustain specific injuries when they ride pillion on the cycle powered rickshaw or motor bike. Two cases of females have been described.

**KEY WORDS:** *Hemi-necklace bruise. Long scarf. Motorbike injuries. Strangulation.*

## INTRODUCTION

Long scarf worn around the neck, producing strangulation injuries, has been described in literature in a very few anecdotal reports.<sup>1-5</sup> These specifically designed clothes are worn by women as a part of their culture and tradition in India, Pakistan, Bangladesh, and Middle East in particular, and are considered the essential part of their religious obligations in certain communities. The victims are usually riding the cycle powered rickshaws while they sustained to these injuries. Aggarwal *et al.*<sup>1</sup> described some features related to these injuries including the persistence of unconsciousness from the outset with death confirmed soon after arrival at hospital. This report describes the peculiar kind of injuries which is a potential hazard of wearing of these loose scarves called *Dopatta* or *Chunni* in the local languages.

## CASE REPORT

**CASE 1:** A 56 years old lady presented in emergency room (ER) with one hour history of fall from motorbike, while riding in the back seat, sitting with both legs hanging over to the left side. She got entangled the free end of her *Dopatta* (long scarf) in the spokes of back wheel and thrown out of the motorbike. She lost consciousness for 5-10 minutes and was received drowsy in ER. She complained of severe neck pain and amnesia of the event. Clinical examination revealed a 3 x 3 x 1.5 cm firm, tender swelling over the forehead, suggestive of subgaleal hematoma. There was also a 10-12cm long, 2cm wide linear bruise/abrasion on the left side of her neck, tailing upwards and backwards (Figure 1). X-ray cervical (C) spine (three views including anteroposterior, lateral and open mouth) showed straightening of cervical curvature but no evidence of fracture, subluxation or dislocation. CT scan of brain was also normal except for a swelling of subcutaneous tissue on the forehead without any underlying fracture. Patient was admitted for neuro-observation with the diagnosis

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of concussion and cervical spine soft tissue injury. Philadelphia collar was provided. She was discharged with head injury protocol. In clinical follow-up after two weeks, dynamic lateral (flexion and extension) cervical spine X-ray revealed no spinal instability. Her cervical pain improved and she was back to her routine after three weeks.

**CASE 2:** A 35 years old female presented with a fall from motorbike while riding in the back seat, with both legs over to the left side of the motorbike. She

reached ER within 30 minutes of accident. On arrival in ER, she was fully conscious and described that the accident happened when she felt a sudden strong pull on her *Dopatta* which she was wearing around her neck. This severely rubbed on her neck and produced a feeling of strangulation and choking. She was thrown off the motor bike and hit the corner of footpath and became unconscious. Her *Dopatta* was found entangled in the spokes of the rim of back wheel of the motorbike.

Clinical examination revealed a 15 cm long, full thickness laceration over the left frontoparietal region. There was a 12-15 cm long and 2 cm wide abrasion on left side of her neck also (Figure 2). She also sustained associated closed fractures at base of right third proximal and fourth terminal phalanges as she landed on her right hand during fall from motorbike.

X-ray C-spine (three views) and CT scan brain were both unremarkable. She was admitted in hospital. The scalp laceration was sutured under general anesthesia and a spica cast was applied on the right hand. She was discharged after 48 hours of hospital stay and followed-up in out-patient clinic for 2 weeks with no sequelae.

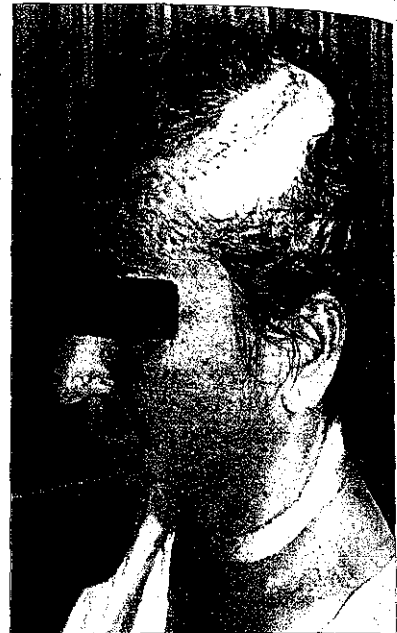


Figure 1: Large laceration (sutured) on the left frontoparietal scalp with severe "hemi-necklace bruise" in the neck.

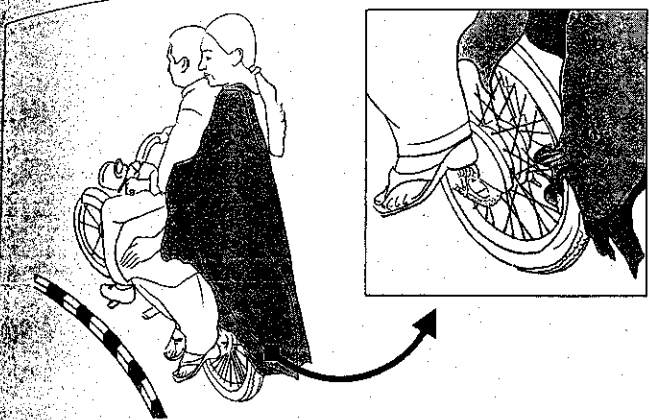


Figure 2: Sketch diagram to show the mechanism of injury and peculiar traditional pillion riding. The inset shows how the long ends of scarf get entangled in the spokes of hind-wheel.

## DISCUSSION

*Dopatta* or *Chunni* is a traditional long scarf worn by majority of women in South-East Asia, and even in Western countries.<sup>1,3,5</sup> Women in our part of the world also have a peculiar way to ride pillion on the motorbike (see sketch in Figure 2). The combination of this long scarf and the peculiar riding tradition has rendered them to become the victim of peculiar kind of potential injuries on the motorbike. While sitting on the backseat of motor bike with both legs on the side, the long scarf ends dangle close to the back wires wheel of the motor bike. The ends of the *Dopatta* gets entangled into the spokes of the motorbike back wheel which may lead to strangulation as a consequence of tugging on neck structures and overthrowing the pillion rider. This type of injury is extremely rare to see with cycle powered rickshaws as described in a report from India but very frequently seen in Pakistan.<sup>1,5</sup> The motorbike ride with a female member and kids on the backseat is common mode of transport due to socioeconomic reasons in both rural and urban areas.

The type of injuries sustained by these victims were cervical injuries and head trauma. Both the patients had a "hemi-necklace abrasion" with bruising of underlying muscles following the fall from motorbike. The bruising pattern was suggestive of impending strangulation and lacerating injury to underlying vital vascular and visceral structures. The free end of long scarf (worn by pillion passenger) got trapped and wrapped in no time in the unprotected spokes of cycle wheel. The cervical injuries included sprain but no bony injury. There was also no spinal cord injury in both the patients. Both the

patients had head injuries and one patient had evulsions of scalp which required suturing under general anesthesia. Both the patients had moderate injuries; the reason for this was the low speed traffic. The mechanisms involved might have resulted in fatal injuries if it had happened in a high-speed traffic system. Another pattern of injuries which was not seen in these cases but have been observed in the emergency room are that females also keep their babies in their laps while riding on pillion of motorbikes with their husbands.

The possibility of death from strangulation by a long scarf was brought to public attention when the world famous dancer Isadora Duncan died on 14 September 1929.<sup>2,3</sup> The long scarf she was wearing was caught in the wire wheels of her Buggati car, stopping the vehicle. Isadora died at the scene on sustaining a fractured larynx and carotid artery injury. This pattern of injuries was later labeled in literature as "Isadora Duncan Syndrome" or "the long scarf syndrome". It is also described in some of the skiing-related injuries victims who were wearing such long scarf while skiing.<sup>6</sup>

The preventing measures involve raising a public awareness about this kind of injury so that they can properly keep both ends of long scarf knotted while riding on the motorbike. The knotting the ends of scarf will shortened the free ends which will not fall close to the spokes of wheel. Specific protective plastic guards (protective covers) should be designed to cover the spokes of wheels, especially the back wheels. Similarly, wearing of helmet by both motorcyclist and pillion rider should be made practical. These preventive measures will definitely reduce these type of incidence.

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