

## Long Scarf Syndrome; Accidental Strangulation due to Long Scarf

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### Abstract

Loose clothing worn by Indian women get accidentally entangled in moving wheel of motor bike or crop thresher and cause accidental strangulation. This study is about the patients admitted in department of otorhinolaryngology with history of accidental strangulation due to long scarf. This study showed that women in rural area are at risk of accidental strangulation due to long scarf getting entrapped in crop thresher, similarly women in urban area are also at risk of accidental strangulation when they sit on the back seat of motor bike and long end of scarf get entrapped into spoke of the moving wheel. Bruise on the anterior neck is most common injury found in our study and associated injury to head was very common.

**Keywords:** Otorhinolaryngology; Women; Neck; Strangulation

### Introduction

Strangulation is a constriction of the neck by a ligature without suspension of the body, the constricting force being applied directly to the ligature. Long scarf with free floating ends worn by Indian women resulted in number of cases of accidental strangulation. Strangulation by long scarf is caused as a consequence of scarf being caught in the wheel spokes of a vehicle and by getting trapped in crop thresher.

### Materials and Method

This study was conducted in the department of otolaryngology and head neck surgery government medical college Srinagar India, and includes thirty seven female patients, presented in our emergency department with history of accidental strangulation due to their long scarf being caught in the wheel spokes of a vehicle while they were sitting in the back seat of the two wheeler vehicle and patients whose long scarf gets trapped in crop thresher.

This study was approved by the institutional ethics committee. All patients were resuscitated; depending on the condition of the patient, tracheostomy was performed when required. After stabilizing the vitals, the neck wound of the patients was examined and fiber optic examination of larynx was done followed by NCCT of the neck and Head as and when required was done. Systemic examination was done in all patients and any positive findings were documented and managed by respective specialists.

Demographics of patients, cause of accidental strangulation, severity of neck injury and other systemic injuries were documented. Days of hospital stay and outcome of treatment was also recorded.

### Results

The results of long scarf syndrome are shown in given below Table 1-4.

Parameter	Number of patients n=37	percentage
<b>Residence</b>		
Rural	16	43.24
Urban	21	56.75
<b>Age</b>		
≤ 20 years	11	29.72
21–35 years	08	21.62
36–50 years	17	45.94
> 50 years	01	02.70

**Table 1:** Demographics of patients.

Cause of strangulation	Number of patients n=37	percentage
Long scarf caught in the wheel spokes of a vehicle	24	64.86
Long scarf trapped in crop thresher	13	35.13

**Table 2:** Cause of strangulation.

## Discussion

Strangulation by long scarf is caused as a consequence of scarf being caught in the wheel spokes of a vehicle. 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 [1]. The scarves are 6-12 feet in length and are slackly wrapped about the neck with their ends flowing freely [2].

Nature of neck injury	Number of patients n=37	percentage
Ligature mark / bruise	34	91.89
Fracture laryngeal cartilage / surgical emphysema	22	59.45
Hematoma / edema of larynx	07	18.91
Dislocated arytenoid	02	05.40

Table 3: Nature of neck injury.

Associated systemic injury	Number of patients n=37	percentage
Head	07	18.91
Spine	02	05.40
Chest	03	08.10
Abdomen	01	02.70
Limbs	09	24.32

Table 4: Associated systemic injury.

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 injury [3].

Cases are documented where cloth entwined in a cycle powered rickshaw by Kohli et al. [4]. Jain reported dupatta causing cervical spine injury in a thresher [5].

The present study shows both cases of long scarf getting trapped in moving wheel of crop thresher and in moving wheel spoke of motor bike. Crop thresher accidents were mostly from rural area where as motor bike accidents were from urban area.

Lesion may vary from injury to superficial tissues to laryngeal rupture and carotid artery stenosis as in Isadora Duncan syndrome. Accidental strangulation deaths result from a compression of the neck leading to asphyxia and also stimulation of carotid sinus or vagal stimulation [6]. In our study Fracture laryngeal cartilage / surgical emphysema was seen in 59% of patients, all of these patients were managed by release incision on neck and upper chest without tracheostomy. Two patients had injury to cervical spine which was managed conservatively by the concerned specialist.

## Conclusion

These accidental strangulations highlights that these kinds of machines (crop thresher) need to be produced with increased safety mechanism and people using them should be educated on hazards of working with machinery as well as using safety measures such as use of plastic or saree guards and alteration in dress with no loose, flowing ends. Similarly females sitting on motor bikes should also take care of their long scarf ends to prevent such fatal accidents. These accidents can be prevented largely through public awareness and education.

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