

References

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Non-fatal Strangulation : An Uncommon Parachute-related Accident

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Summary

A case of non-fatal strangulation of the neck by rigging lines of a parachute during military training is presented. It is an unusual but potentially life-threatening injury. Probable factors leading to such injury are discussed.

Key Words: Parachute, Accident, Strangulation

Introduction

Parachuting, once regarded as a mean of transporting troops to battle fields, has now become recreational. With the formation of many amateur and professional parachuting clubs, increasing number of people all over the world can now enjoy the excitement and challenge of parachuting. Although adventurous, it is not without risks or dangers. This case report describes an unusual but potentially life-threatening injury which occurred in service parachute trainee in Kubang Kerian, Kelantan.

Case Report

A 22-year-old Royal Malaysian Air Force female trainee, made her maiden jump from an altitude of about 10,000 feet while undergoing service parachute

training in Kelantan, Malaysia. During the initial free drop from the plane, she suddenly realised that one of the parachute's rigging lines was tied around her neck. She felt strangulated and lost consciousness momentarily, but, somehow managed to free herself from the entanglement within approximately 4 seconds and landed safely after a further 6 seconds.

On arrival at the Accident and Emergency Unit of Hospital Universiti Sains Malaysia, she was fully conscious and well orientated. Her only complaint was a severe pain in the neck with some difficulty in swallowing. Neck examination revealed the rope mark extending from the midline posteriorly to the left side of the neck, crossing the anterior neck and ending on the right side of the neck. A uniformly constricting band of about 5cm width was produced with areas of



Fig. 1a, b: Anterior and posterior views of the neck showing the constricting band with surrounding bruises, haematomas and oedema

haematoma, bruises and marked soft tissue swelling (Figs. 1 a, b). There was restriction of neck movements because of pain.

There was no subcutaneous emphysema and fundoscopy was normal. Laryngoscopy revealed no laryngeal or pharyngeal oedema and the vocal cords were moving normally. Neck X-ray did not show any fracture or dislocation of the larynx or cervical vertebrae. Arterial blood gases were normal. She was managed conservatively and discharged 5 days later with no untoward complications.

Discussion

The various hazards of parachuting had been well documented. The overall injury rate varied from 0.4% on military training parachute descents¹ to 0.36% in civilian training programme². Most of these unfortunate but sometimes fatal injuries were attributed to failure in observing the rules of parachuting and often correlated to ignorance and inexperience of the parachutist.

Parachute injuries occur mostly on landing. However,

this case report revealed that injury could still occur while the parachutist is still in the air which is said to be rare in the modern-day parachuting. Strangulation of the parachutist's neck was noted in one retrospective study³.

In our case, it can be speculated that the patient may have made a faulty exit from the plane to have caused her to somersault or twist, increasing her chances of being caught in the rigging lines. Or, she might have done an over enthusiastic leap which could cause twists on the developing rigging lines, resulting in her neck being strangled by one of the lines.

Since the strangulation occurred for approximately 4 seconds only and the force of strangulation was presumably not strong, there was no residual mental changes from transient unconsciousness or permanent damage to the laryngeal structures.

Accidental strangulation of the neck during parachute jumping could thus be avoided if safety precautions and rules which the parachutist should observe, are strictly followed so that safe descent can be ensured.

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