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FATAL BUNGEE JUMP: A CASE REPORT

Satish K. V¹, Raghavendra R²

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ABSTRACT: As more and more people seek for excitement out of their routine works, extreme sports have become a popular activity. Among which, bungee jumping is obviously one of the famous and thrilling one. Since the promotion of the sport at 1980s, million of people worldwide have taken the plunge in to this extreme sport. Many safety standards and strict guidelines have set up to protect the public from casualties as much as possible. Unfortunately, even with all these advances in this direction, bungee jumping accidents still occurs. Here we report a case of 25 year old man sustained fatal injuries when he fell down from 50 ft height while performing bungee jump.

KEYWORDS: Fatal, Bungee jump, Fall.

INTRODUCTION: Bungee jumping is a recreational sport that has gained worldwide popularity. Bungee jumping is an activity that involves jumping from a tall structure while connected to large elastic cord. Tall structures are usually a fixed object, such as buildings, bridge or crane; but it is possible to jump from a movable object, such as hot air ballon or helicopter. First modern bungee jump were made on 1st April 1979 from 250 feet cliffon suspension bridge in Bristol, by member of the oxford university dangerous sport club.¹

As of November 2009, a study conducted by the WESA(world extreme sports association) recorded that 422 people have died as a result of bungee jumping since its rise to popularity. It also reports that of chances of death from bungee jump is approximately 1 in 5 lakhs. One bungee jump is approximately as dangerous as driving 100 miles by automobile.² injuries and deaths which have occurred have made safety an integral issue in the practice of sport.

CASE REPORT: A 25 year, male was brought to department of forensic medicine, Victoria hospital, BMC&RI, Bangalore with alleged history of witnessed fall from height of 50 feet while performing bungee jump at about 2: 30 in the afternoon and he succumbed to injuries in the spot. A case of criminal negligence was booked U/S 304 (A) IPC over bungee jump authorities.

Autopsy Findings:

External examination: Dead body is that of a male measuring 170 cms in length, moderately built and moderately nourished. Rigor mortis is present in all parts of the body. Livor mortis is present over back of the body. ECG chest leads are present insitu.

External injuries: 1. Abrasion measuring 4cm*3cm is present over the right side of forehead just above the eyebrow. 2. Abrasion measuring 4cm*3cm is present over the right side of face just outer to the outer canthus of right eye. 3. Abrasions measuring from 2cm*1cm to 1cm*1cm

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are present over the right arm and forearm in the front. 4. Laceration measuring 3cm*2cm*bone deep is present over the back of the right forearm.

Internal injuries: On reflection of scalp, Extravasation of blood is present diffusely all over the scalp. Fissured fracture measuring 23cms is present over the left frontal bone extending from above the orbit till the vertex. Both parietal bones and the base of the skull in anterior and middle cranial fossa are fractured irregularly and are in alignment. Brain lacerated irregularly over the parietal lobes and over the base of skull in the frontal region. Subdural haemorrhage and subarachnoid haemorrhage diffusely present. Blood Extravasation is present in the right side chest wall posteriorly. Ribs 2nd to 5th rib are fractured posteriorly over the right side. Pleurae lacerated corresponding to fracture site. Right lung is contused posteriorly. Peritoneal cavity contains 500 ml of blood. Liver lacerated irregularly. Right kidney is contused. Right side radius and ulna are fractured in middle. Left radius and ulna fractured in lower end. Right femur is fractured in the middle. Left tibia is fractured in the lower end. Sternum fractured in the middle. All injuries were antemortem in nature. Abrasions were bright red in colour. Blood extravasation was present over fracture ends.

Opinion as to the cause of death: Death is due to shock and haemorrhage as a result of injuries sustained.

DISCUSSION: Increased popularity of the bungee jump sport has raised question about safety and risk of jumping: as well as the risk that people who jump are exposed to injuries. A bungee jump can be separated on three different stages: free fall, body acceleration, and upward movement. During Free fall stage, all jump stress hormone like growth hormone, beta endorphin, prolactin, testosterone and adrenaline are released. It could explain the feelings of exhilaration and well being that often occurs and last for some days after a single jump. Second stage a sudden body deceleration occurs because the elastic property of the cord.

The more intense deceleration the more is the risk of injuries. The intensity of deceleration depends on kind of cord used and attitude of jump. Third stage upward movement in head down position. Major bungee jumping injuries have been impact related. Minor injuries include contusions, pinched fingers and cord burns to the body.³ peroneal injuries, near hanging, quadriplegia, intraocular haemorrhages⁴ and carotid artery dissection leading to a type of stroke⁵ are more serious injuries that are being reported. Risk with bungee jumping is only sporadically reported in the literature, most often in connection with eye injuries, but also rare events of serious, life threatening injuries and even death.

CONCLUSION: Bungee jumping results in a wide range of injuries owing the nature of the sport. Additional risk is present when there are lack of experience and faulty equipment. Formalized regulations should be established with specific standards and guidelines on equipment and practices. There is a poor literature about this sport and general population may not be aware of risks. The development of new equipment designs or variation of the sports should be thought since a lot of fun and adventure could be experienced in this extreme sport.

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Fig. 1: Deceased with bungee jump belt insitu



Fig. 2: Right thigh bone (femur) fractured in the middle

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Fig. 3: Right side radius and ulna bones fractured in the middle



Fig. 4: Left side radius and ulna bone fractured in lower part



Fig. 5: Liver lacerated irregularly

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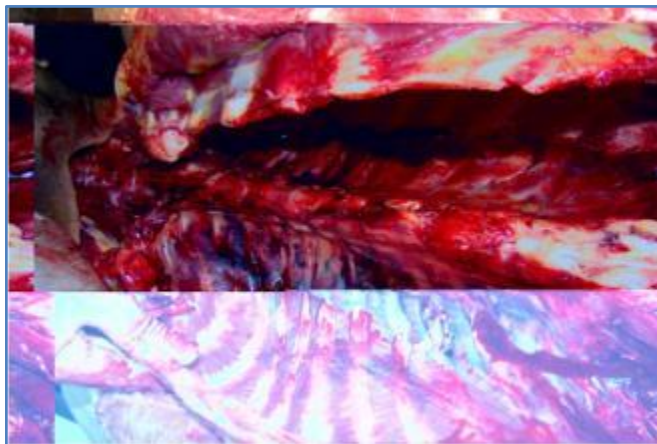


Fig. 6: Right ribs from 2nd to 5th fractured posteriorly



Fig. 7: Diffuse blood extravasation on reflection of scalp

AUTHORS:

1. Satish K. V.
2. Raghavendra R.

PARTICULARS OF CONTRIBUTORS:

1. Associate Professor, Department of Forensic Medicine, Bangalore Medical College & Research Institute, Bangalore.
2. Post Graduate Student, Department of Forensic Medicine, Bangalore Medical College & Research Institute, Bangalore.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Satish K. V,
397, 9th Main Road,
G. P. Rajarathnam Road,
H. Nagar, Bangalore – 19.
E-mail: drsatishkv@gmail.com

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