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Unusual Presentation of Cervical Vertebrae Fracture following Fall from Height - A Case Report

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Abstract: A cervical fracture (broken neck) is a catastrophic fracture of any of the seven cervical vertebrae in the neck. Common causes in humans are traffic collisions and fall from height. Abnormal movement of neck bones or pieces of bone can cause a spinal cord injury resulting in loss of sensation, paralysis, or death. In case report a 16 year old boy residing in hostel went to movie at evening without permission of warden. When he back it was late, so the hostel gate was closed. Then he jumped from 12 feet hostel gate, but he couldn't land safely. Soon after the jump he felt giddiness and had one episode of vomiting. He went to his room and slept for a while, but he was feeling unwell, so his roommates informed to warden, he took him to hospital for the treatment. In Post Mortem Examination, on examination of vertebrae, there was un displaced fracture of cervical vertebrae at the level of C6-C7. In discussion and conclusion When the victim jumped from the height and landed on his feet, there was un displaced fracture of cervical vertebrae at the level of C6-C7. Because of un displaced fracture he had only minor symptoms. As the patient makes moves, there was gradually narrowing of the spinal cord leading to giddiness and respiratory failure, finally ended up with death.
Keywords: Cervical Vertebrae, Undisplaced Fracture, Sudden Death.

INTRODUCTION

A cervical fracture (broken neck) is a catastrophic fracture of any of the seven cervical vertebrae in the neck. Common causes in humans are traffic collisions and fall from height. Abnormal movement of neck bones or pieces of bone can cause a spinal cord injury resulting in loss of sensation, paralysis, or death.

Around 5-10% of unconscious patients as the result of a motor vehicle accident or fall have a major injury to the cervical spine. Most cervical spine fractures occur predominantly at 2 levels. One third of injuries occur at the level of C2, and one half of injuries occur at the level of C6 or C7. Most fatal cervical spine injuries occur in upper cervical levels, either at craniocervical junction C1 or C2.

INCIDENCE

The U.S. Consumer Product Safety Commission (CPSC) tracks product-related injuries through its National Electronic Injury Surveillance System (NEISS). According to the CPSC, there were an estimated 14,390 neck fractures treated at U.S. hospital emergency rooms in 2009. Of these, an estimated 2,692 were sports-related.

CASE REPORT

A 16 year old boy residing in hostel went to movie at evening without permission of warden. When he back it was late, so the hostel gate was closed. Then he jumped from 12 feet hostel gate, but he couldn't land safely. Soon after the jump he felt giddiness and had one episode of vomiting. He went to his room and slept for a while, but he was feeling unwell, so his roommates informed to warden, he took him to hospital for the treatment.

He was examined at the casualty of Adichunchanagiri Institute of Medical Sciences, BG Nagara, Nagamangala, Mandya District, and Karnataka, India.

On examination there were no signs of neurological deficit, so doctor advised him antiemetic injection and DNS and CT scan of head. But patient relatives didn't agree for scanning and they requested the doctor to give some medications in an OPD basis. But after some time he felt uneasy, his oxygen saturation was dropping, BP and Pulse become un recordable. After some time he was declared dead.

POST MORTEM EXAMINATION

Deceased body was taken to Post-Mortem at Department Of Forensic Medicine & Toxicolgy, Adichunchanagiri Institute of Medical Sciences, BG nagara, Nagamangala taluk, Mandya district.

On opening the chest cavity, heart and pericardium was intact, with normal weight, no signs of gross blood clot in the coronaries. Both lungs were intact and cut section shows severe congestion indicating asphyxia.

On opening the abdomen cavity, all the organs were intact and weighing normally, no signs of hemo and pneumo-peritoneum. No evidence of organ injuries.

Blood and viscera were forwarded to Forensic Science Laboratory, at Bangalore, but it came negative for any kind of poison.

On opening the skull cavity, there were no signs of intracerebral and intracranial hemorrhages. Cut section of brain was congested.

On examination of vertebrae, there was un displaced fracture of cervical vertebrae at the level of C6-C7. Cause of death: death is due to un displaced fracture of cervical vertebrae at the level of C6-C7.

DISCUSSION

When the victim jumped from the height and landed on his feet, there was un displaced fracture of cervical vertebrae at the level of C6-C7. Because of un displaced fracture he had only minor symptoms. As the patient makes moves, there was gradually narrowing of the spinal cord leading to giddiness and respiratory failure, finally ended up with death.

CONCLUSION

- The specific treatment of a cervical fracture and/or dislocation ultimately depends on a number of factors.
- type and location of fracture
- severity of fracture and amount of displacement
- presence of spinal cord/nerve compression
- presence of neurologic dysfunction or spinal cord injury
- patient's age, medical condition, and associated injuries
- The clinician should carefully evaluate a patient's injuries, and with the general management guidelines for cervical fractures in mind, individualize the treatment based on all of the above-mentioned factors.

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