

## Blast Induced Neurotrauma: A Retrospective Study from Conflict Zone

Shashivadhanan Sundaravadhanan MS, MCh, DNB

### Introduction

Blast Induced Neurotrauma(BINT), is a newer entity of neurotrauma which is steadily becoming a civilian disease. Surgeons and health care providers, practicing both in combat and non-combat zone need to know about BINT. As on date there are no guideline specified regarding management of BINT. The Brain Trauma Foundation also does not address BINT specifically.

### Methods

This retrospective study was carried out by Neurosurgeons from the Indian Armed forces covering a period of 10 years. Patients were classified on basis of Glasgow Coma scale, cranial peneteration.and associated head,neck and maxillofacial injury. All cases underwent neuroimaging and other necessary investigation before offering surgical intervention. Patients with Glasgow coma scale of 8 or below were put on mechanical ventilation. Patients with life threatening mass effect were taken up for emergency decompressive procedure while others were offered a trial of conservative management.Operative intervention was considered following failure of conservative management

### Results

A total of 1563 cases of blast injuries were treated. Out of these 442 cases suffered head eyes and maxillofacial injuries. 92 patients had evidence of cranial penetration and were offered surgery.88% were taken up for surgery within 6 hours of trauma. The balances were taken following failed conservative management. 6 required reoperation. The overall mortality was 12%.Majority of patients were between 20 to 25 years of age group and most of them reached our centers within 1 to 4 hours from the time of injury.85% of operated case has evidence of injury in the supratentorial compartment. 60% of patients had a good outcome.

### Conclusions

About 1/3rd cases of BINT have associated head and neck injuries. All cases with evidence of cranial penetration require surgical intervention. Majority respond well to early surgery. Neurological status at the time of presentation, respiratory depression, Hypovolemia and associated injuries are poor prognosticators.

### Learning Objectives

By the conclusion of this session,participants should be able to 1)diagnose and prognosticate patients with BINT.2)Decide on the type of Neurosurgical intervention

### References

total 46 References

[Default Poster]