

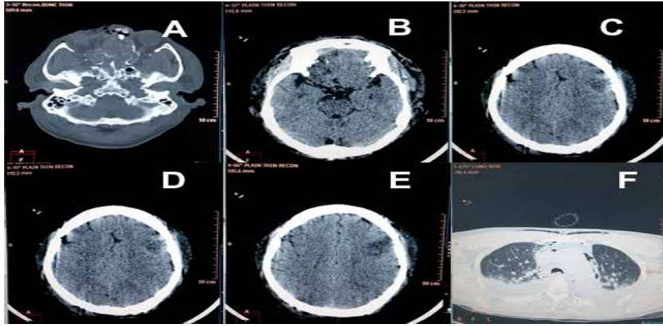


MILITARY SUPERBUG' ACINETOBACTER BAUMANII INDUCED SEPSIS IN CRANIOFACIAL GUNSHOT INJURIES

Lt Col Dr Inam Danish Khan, Professor, Army College of Medical Sciences, India

INTRODUCTION

- Guns and assault rifles have been indispensable weaponry from medieval to modern era
- Gunshot injuries cause gunpowder propelled projectile induced penetrating ballistic polytrauma
- Gunshots comprise 50-90% of injuries encountered during low-intensity conflicts
- Secondary infections by 'military superbug' *Acinetobacter baumannii* complicating to sepsis can jeopardize survival.



CASE 1:

- A 52-year-old combatant sustained craniofacial gunshot injury over face and right eye.
- He was evacuated to a secondary care facility.
- Emergency management was done
- Continuous haemorrhage from oral cavity - massive transfusion with 22 units whole blood within 48 hours of injury.
- He was air evacuated on ventilator support to a tertiary care facility on the third day post injury
- The Glasgow Coma Scale (GCS) was 7/15
- NCCT head- multiple fractures and contusions
- NCCT chest-B/L pleural effusion
- NCCT spine – multiple metallic foreign body
- 6th day post injury -blood culture showed multidrug resistant *Acinetobacter baumannii* , colistin was initiated
- 12th day post injury-hypotension, bilateral basal crepitations, decreased breath sounds with basal lung atelectasis
- Day 16 post injury- 104°F fever with respiratory distress right lower lobe consolidation and bilateral pleural effusion.
- Continuous deterioration with deranged renal parameters.
- Day 24th of injury- succumbed to cardiac arrest.
- The cause of death was pneumonia and sepsis with multiorgan dysfunction.

CASE 2:

- A 48-year-old combatant sustained gunshot injury at the angle of right mandible involving the face and neck,
- He was resuscitated from hypovolemic shock, cardiac arrest and initiated on mechanical ventilation
- NCCT,MRI-cebral edema ,watershed infarct of cerebral arteries, cord compression,vertebrae fracture.
- Air evacuated on ventilator support under sedation to a tertiary care facility
- GCS was E1VETM1,quadriplegia and sluggish pupils
- Exploration-laceration of C5 with cord edema
- ICD for lung consolidation and left pleural effusion
- Tube feeding via gastrostomy and jejunostomy
- Deranged renal parameters
- Persistent fever,gaspng respiration,hypotension,neutrophilic Leukocytosis
- Tracheal cultures and blood cultures revealing MDR *Acinetobacter baumannii*.
- Serum procalcitonin levels reached 28 ng/ml despite the initiation of colistin
- He succumbed to cardiac arrest on the 26th day post injury.
- The cause of death was sepsis due to MDR *Acinetobacter baumannii*

DISCUSSION AND CONCLUSION

- Gunshot wounds in the battlefield/operational scenario are severely damaging and lethal
- Only 10% of patients survive to reach a medical facility
- Trauma scoring and stabilisation of the patient to cater for long periods of evacuation is critical
- Gunshot projectiles cause massive tissue devitalization, ischemia, anoxia and coagulopathy, and increased susceptibility to infections
- Both patients survived for more than 23 days due to vigorous resource-intensive efforts
- succumbed to secondary infection
- High index of suspicion is warranted toward emerging infectious diseases caused by *Acinetobacter*
- Mandated prudent emphasis on secondary and opportunistic infections in battlefield and tertiary care to optimize outcome in gunshot injuries.

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