

IMAGES OF EMERGENCY MEDICINE

Trauma

Man with altered mental statusAndrew Mullin MD | Craig E. Krausz MD | Cindy C. Bitter MD, MPH 

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1 | PATIENT PRESENTATION

A 21-year-old male presented by ambulance for evaluation of altered mental status. Family told the paramedics that he was preparing gear for an upcoming hunting trip. They also indicated that he seemed depressed and had been drinking alcohol to excess. Upon arrival to the emergency department, he had a non-reactive right pupil, dried blood on the lips, and a 1 cm wound in the left submandibular region. Glasgow Coma Scale was 10; he would not open his mouth for exam. Non-contrast computed tomography (CT) of the head, facial bones, and cervical spine were obtained. Alcohol level was 178 mg/dL.

2 | DIAGNOSIS**2.1 | Crossbow injury**

CT brain showed transection of the right optic nerve (Figure 1) with extensive pneumocephalus and intraparenchymal hemorrhage along the course of the bolt (Figure 2).

He was admitted to the intensive care unit (ICU) for airway monitoring and neurological checks and was taken for surgery by otolaryngology and ophthalmology for optic nerve decompression and repair of facial fractures. He later admitted that he had shot himself in a suicide attempt and was transferred to the inpatient psychiatric unit after treatment of the acute injuries. Upon discharge, he had Horner's syndrome and blindness of the right eye.

From 2016–2020, the National Electronic Injury Surveillance System estimates there were an average of 4391 injuries from



FIGURE 1 Computed tomography of the facial bones showing transection of the right optic nerve (asterisk)

archery equipment annually, with no fatalities.¹ A review of crossbow injuries found a 69% mortality rate.² Homicide accounted for 53% of fatalities, suicide for 32%, and accidental injuries for 16%. Despite relatively minor external injuries, crossbow injuries can be devastating.

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FIGURE 2 Computed tomography of the head showing hemorrhagic contusion (white arrow) and pneumocephalus (black arrow)

REFERENCES

1. US Consumer Product Safety Commission. The National Electronic Injury Surveillance System. <https://www.cpsc.gov/cgibin/NEISSQuery/UserCriteria.aspx?UserAff=CvbkBwSYvXoJ%2blc0Tfzwdg%3d%3d&UserAffOther=9OYR9kUytlsLilKZieD5xg%3d%3d> Accessed Sept 9, 2021.
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