

IMAGES IN EMERGENCY MEDICINE

Trauma

Devastating injury from blunt airbag trauma

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1 | PATIENT PRESENTATION

A 22-year-old unrestrained female driver presented after a head-on motor vehicle collision with airbag deployment. She was found to have near-complete traumatic left globe enucleation without globe rupture or other facial trauma (Figure 1A). Operative exploration revealed complete transection of the optic nerve (arrow), medial, and inferior rectus muscles (Figure 1B). The lateral and superior rectus muscle insertions were intact. She underwent surgical completion of enucleation with placement of an orbital implant to enable eventual prosthesis rehabilitation. Exploration at the scene of the accident did not reveal any potential penetrating foreign body or windshield disruption. The mechanism of the enucleation was attributed to airbag deployment.

2 | DIAGNOSIS: TRAUMATIC ENUCLEATION

Since the 1998 frontal airbag mandate, eye injuries have been found after 3% of deployments, most commonly corneal abrasion, hyphema, or eyelid laceration.¹⁻³ Although extensive blunt globe rupture ultimately leading to enucleation has been reported, primary traumatic enucleation without globe injury is not yet described.⁴ In the setting of severe traumatic ocular injury, emergent ophthalmic evaluation is indicated. For a non-salvageable eye, completion of enucleation should be performed to lower infection risk and decrease the incidence of sympathetic ophthalmia, which may pose a threat to the contralateral eye.⁵

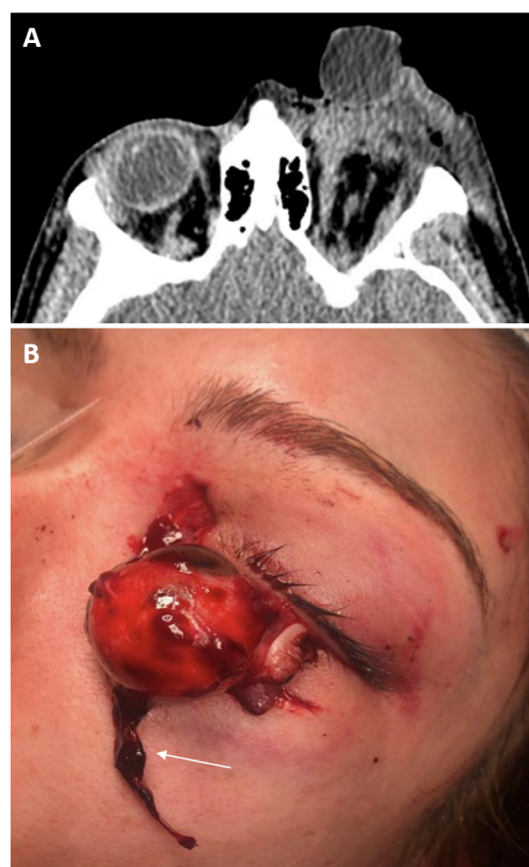


FIGURE 1 Near complete traumatic left globe enucleation shown on (A) computed tomography and (B) clinical images, with transection of the optic nerve (white arrow) and diffuse extraocular muscle disruption

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CONFLICT OF INTEREST

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