



To the Editor:

I read with interest Lin et al's¹ article on transorbital intracranial brain injury about very infrequent lesions in civilian life, but ones that may have fatal consequences, as occurred in the authors' Case 2.

In the 2 cases presented in the article, the severity of the lesion was obvious, but in some cases, it is not so easy to make the diagnosis of intracranial injury. I think this is a remarkable issue because of the risk of missing intracranial lesions.

For example, in a recent case reported by Calvo-Rubal et al,² a fencing teacher received a transorbital intracranial lesion that was not diagnosed by an emergency doctor. The patient received an apparently trivial orbital trauma from a fencing foil, and had a normal physical examination. A few hours later, he deteriorated rapidly, requiring orotracheal intubation. Cranial tomography (TC) showed a right temporal hematoma that required emergency surgical evacuation.

In a literature review of more than 150 articles dealing with penetrating intracranial injuries, we found a great number of cases of transorbital intracranial injury that was not diagnosed in the beginning and complicated in the evolution with intracranial hematoma, vascular lesions (pseudoaneurysms, carotid cavernous fistulas or arterial sections) or infectious complications.

So, 3 things must be stressed:

- (1) Clinicians must have a high index of suspicion regarding every orbital lesion, especially if the traumatic object is more than 2 inches in length.³ Periorbital injuries often appear to be superficial, and generally the globe is not damaged; because of that, this kind of lesion may be considered trivial by patients and physicians.^{2,4}
- (2) Neurosurgeons must have a very high index of suspicion regarding vascular injury in these lesions.^{5,6} This is due to the vascular intracranial relationships of the orbit with cavernous sinus and the anterior part of the circle of Willis, and with the possibility of penetration in the posterior fossa.^{7,8} An apparently trivial wound may lead to death days or weeks later because of rupture of a traumatic aneurysm. Arteriography must be done promptly if the surgeon suspects a vascular lesion. du Trevou and

van Dellen⁸ did not find differences in the number of traumatic aneurysms diagnosed in patients who underwent arteriography 1 or 2 weeks after the orbital trauma. So, those authors recommend that vascular study is done as soon as possible.

- (3) Infectious intracranial lesions are potential complications of transorbital or transfacial intracranial trauma. Abscesses or empyema can appear days, weeks, months or years after the trauma, and retained bodies or metal particles are associated with a 10-fold higher risk of infection.⁹

I congratulate the authors for such an interesting article about this infrequent kind of lesion.

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