Ocular pulsations due to posttraumatic compromise of the orbital roof

A 21-year-old man was in a motor collision, resulting in skull fractures and subsequent craniectomy (figure). When he was able to communicate, 60 days after injury, he reported vertical oscillopsia and a throbbing sensation around his left eye. Examination revealed monocular left orbital pulsations (video on the Neurology® Web site at Neurology.org). Orbital pulsations can result from a cavernous carotid fistula, orbital venous varix, orbital arteriovenous malformation, orbital tumor, intraorbital ophthalmic artery aneurysm, tricuspid regurgitation, or orbital wall defects associated with neurofibromatosis. Orbital pulsations have been rarely reported due to incompetent orbital bone structure. This case illustrates orbital pulsations associated with postsurgical, posttraumatic oscillopsia.

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