

Intraocular Silicone Oil Masquerading as Eye Hemorrhage

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Abstract

An 87-year-old man presented to the emergency department complaining of a frontal head injury. Brain computed tomography scan revealed hyperdensity in the vitreous cavity of the right eye, suggesting intraocular hemorrhage. The patient's family reported that he had a history of retinal detachment, which was presumably treated by tamponade with silicone oil. Eye examination by an ophthalmologist indicated no vitreous or retinal hemorrhage. Since intraocular silicone oil is being increasingly used for treatment of retinal detachment, emergency physicians must become familiar with its unique characteristic of mimicking hemorrhage in medical imaging.

Keywords: Eye trauma; Silicone oil; Ocular hemorrhage; Medical imaging

Case Report

An 87-year-old male was admitted to our emergency center. The patient fell and hit the frontal portion of his head; he complained of headache, nausea, right eye pain, and limited vision due to swelling of the eyelids. He had a history of controlled hypertension. His vital signs were stable and he had several superficial wounds, including an eyelid bruise. Neurological examination revealed his Glasgow Coma Scale score was 15 without neurologic localizing signs. Brain computed tomography (CT) was performed to assess the patient for the presence of orbital fractures, extra-ocular muscle herniation, and globe rupture and showed a hyperdense mass lesion in the right vitreous cavity, which was assumed to be a vitreous hemorrhage (Figure 1).

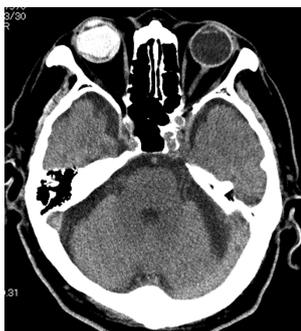


Figure 1: Brain computed tomography scan.

Upon ophthalmology referral, the patient was diagnosed with glaucoma. Fundus examination revealed no vitreous or retinal hemorrhage. After careful review of the patient's medical history, the diagnosis was radiologically and clinically re-evaluated and found to be glaucoma attack due to complications from silicone oil in the eye,

which was inoculated during previous treatment for retinal detachment.

Discussion

Approximately 2% to 6% of trauma patients admitted to hospitals present with ocular injuries. The most common injuries are contusions or superficial injuries, followed by closed orbit fractures [1]. Patients with eye injuries may present with grossly normal eyes and good visual acuity at initial contact; however, subsequent ocular disorders may become apparent. Since trauma is the second leading cause of blindness, intervention should be considered; poor visual acuity can be associated with this complication [2,3].

Silicone oil is widely used for internal tamponade to treat complicated retinal detachment with giant tears, proliferative vitreoretinopathy, and trauma. Since the long-term presence of silicone oil in the eye leads to complications such as cataracts, glaucoma, or late corneal decompensation, early removal of silicone oil is recommended as soon as possible after it has fulfilled its purpose in tamponade [4].

CT is a useful technique to detect bone involvement and ocular damage with concomitant intracranial hemorrhage to help decision making in subsequent management [5]. The radiological characteristics of silicone oil in the eye include high attenuation on CT, mimicking hemorrhage. As the use of intraocular silicone oil increases, the importance of recognizing the appearance of silicone oil in neuroradiologic examinations also increases.

Conflict of Interest

No potential conflicts of interest relevant to this case report were declared.

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