

Speargun

Case reports

Surgical removal in the anterograde direction of the projectile is the safest form of treatment. The few precedents for the removal of a fishing harpoon from the cranium in the literature also advocated anterograde removal ^{1) 2)}.

Improvements in the efficacy of fishing spears have hinged upon the addition of spring-loaded blades and barbs, which deploy upon contact with a higher density material: typically and hopefully fish flesh. The grain of these blades runs against as the harpoon's trajectory, ensuring additional damage to brain parenchyma and vasculature with a retrograde approach.

2016

Severe head trauma by speargun ³⁾.

2014

[Penetrating intracranial injury](#) by mechanisms other than gunshots are exceedingly rare, and so strategies and guidelines for the management of PBI are largely informed by data from higher-velocity penetrating injuries. Here, we present a case of penetrating brain injury by the low-velocity mechanism of a harpoon from an underwater fishing speargun in an attempted suicide by a 56-year-old Caucasian male. The case raised a number of interesting points in management of low-velocity penetrating brain injury (LVPBI), including benefit in delaying foreign body removal to allow for tamponade; the importance of history-taking in establishing the social/legal significance of the events surrounding the injury; the use of cerebral angiogram in all cases of PBI; advantages of using dual-energy CT to reduce artifact when available; and antibiotic prophylaxis in the context of idiosyncratic histories of usage of penetrating objects before coming in contact with the intracranial environment. We present here the management of the case in full along with an extended discussion and review of existing literature regarding key points in management of LVPBI vs. higher-velocity forms of intracranial injury ⁴⁾.

2013

Bonsignore et al report a rare occurrence of suicide due to 4 speargun shots, 3 to the chest and 1 to the head. A complete forensic approach led to attribute the death to acute cardiac failure due to hemopericardium after the injury of the left coronary artery. Scene investigation and autopsic findings allowed authors to hypothesize that injury to the head was a last attempt of suicide, elapsed during the progression of cardiac tamponade. With this report, the authors would like to share knowledge with the forensic community about speargun-related lesions distinguishing them from the very similar ones produced by cold steels. It also shows how it is possible to survive for some time after being shot by such a weapon ⁵⁾.

2011

A case of [penetrating intracranial injury](#), caused by a speargun in a suicide attempt has been described. Although this kind of injuries has been previously reported, the present case is specially interesting because the patient showed no neurological deficit after surgery. Some advices about the medical and surgical management are proposed based on this case and our literature review. The use of antibiotics and antiepileptic drugs and the anterograde extraction of the harpoon aided by the performance of a craniotomy surrounding the exit point are recommended ⁶⁾.

¹⁾

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³⁾

Peligero Deza J, Marín Zaldivar C, García Aguirre L, Casans Francés R. Severe head trauma by speargun. *Rev Esp Anesthesiol Reanim*. 2016 Mar;63(3):186-187. doi: 10.1016/j.redar.2015.06.001. Epub 2015 Jul 17. English, Spanish. PubMed PMID: 26194905.

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Williams JR, Aghion DM, Doberstein CE, Cosgrove GR, Asaad WF. Penetrating brain injury after suicide attempt with speargun: case study and review of literature. *Front Neurol*. 2014 Jul 7;5:113. doi: 10.3389/fneur.2014.00113. eCollection 2014. PubMed PMID: 25071701; PubMed Central PMCID: PMC4083241.

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