Reviewer's report

Title: An unusual case of trans-orbital rod fence stab injury with a good outcome.

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Reviewer: Jose Maria M Pascual

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COMMENTS TO AUTHORS

The article “An unusual case of trans-orbital rod fence stab injury with a good outcome” by Massimo Miscusi et al, reports an exceptional case of a penetrating orbitofrontal head injury caused by an accidental fall on a large metallic rod fence. After the metallic rod being removed without complications the patient underwent an emergent successful surgery for the repairment of his complex compound orbitofrontal and zygomatic fracture, including the surgical closure of the torn superior longitudinal sinus and the debridement and vigorous irrigation of cerebral wound along the trajectory of the injury. The fortunate lack of intracranial injury to vital vessels, the anatomical integrity of the patient’s right ocular globe and the skillful reconstruction of the orbital “burst” fracture by the team of neurosurgeons and maxilla-facial surgeons allowed the excellent patient’s visual and neurological outcome.

The article reports on the planning of a successful surgical strategy for the treatment of a very complex penetrating orbitofrontal injury caused by a unique kind of object and given the excellent outcome this case represents an exceptional account of such an injury. Therefore I strongly recommend its publication in BMC Surgery. The report of the case is concise, interesting and well-written, the surgical steps to be carried out are clearly exposed and the discussion of the major concerns to be taken into account is well structured. The review of the literature is appropriate for this case report. The selected images are impressive and illustrative of the surgical procedure. Overall, the scientific quality and style of this report is quite high.

Discretionary revisions: The authors must remark in their discussion the high risk associated with the removing of any foreign body out from the skull after a penetrating brain injury. Regardless the patient neurological status and the administering of sedation any undue lever force applied on the object without accurate knowledge of its shape and the extent and depth of the brain trajectory may result disastrous for the patient outcome. The second concept I would stress in the discussion is the so often ocular sparing observed in these kind of high speed transorbital stab injuries, no matter how damaging they look like. I presume that the “burst” fracture of the orbital compartment (a comminute fracture of the floor, roof and both walls of the orbit) allows the ocular globe to undergo a lateral and downward displacement without being smashed against an osseous wall. As a result the necessary room to the penetrating object within the orbit is provided and the integrity of the ocular globe is preserved. The
reconstruction of the orbit should be performed considering such an ocular integrity in all cases.

To finish up I would suggest the authors to change the term trans-orbital by orbito-frontal in the title of this case report, in order to emphasize the double orbital and intracranial frontal damage observed in this penetrating injury. Receive my sincere congratulations for the excellent functional and aesthetic result and deep respect for your surgical skillfulness.

Minor essential revisions: In the background section, in the 3rd and 4th lines, “through” instead of “in”; In the 10th line, the word “sometimes” is repeated. It is better: “so-called slot fracture is produced and diagnosed…”

In the second page of Conclusions, 4th line, “Despite” instead of “Although”. In the 6th line, remove “and”. In the 9th line, put a comma after “Furthermore”. In the 10th line, “paresis of the right superior rectus muscle”.

**Level of interest:** An article of outstanding merit and interest in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests