Title: Penetrating aortic injury left untreated for 20 days: A case report

Authors:
Alessia Giaquinta (alessiagiaquinta@gmail.com)
Dovile Mociskyte (mociskyte@gmail.com)
Giuseppe D'Arrigo (gdarr@hotmail.it)
Giuseppe Barbagallo (giusepp barbargal@hotmail.com)
Francesco Certo (francescocerto@gmail.com)
Massimiliano Veroux (veroux@unict.it)
Pierfrancesco Veroux (pveroux@gmail.com)

Version: 1 Date: 19 Nov 2017

Reviewer reports:

Dave Veerasingam (Reviewer 1): Reviewer(s) comments to Author

This case report will be of great interest to readers who manage patients with penetrating trauma requiring surgical management. It is also exceptionally rare as although there are studies and reports of high velocity bullet injuries as well as bullets discovered after a prolonged period of time; it is clear (especially from the video) that the outcome would have been completely different if the patient had not been appropriately assessed clinically on arrival and referred on to the specialist surgical centre to get an excellent outcome. The impacted bullet on the aorta is a clear indication for surgical exploration. Hence such case reports are important to be published.

Thank very much for your kind comments that will improve significantly the manuscript.

Some comments for consideration:

1) The authors could have described in more detail with regards the nature of the injury sustained - if the patient was standing upright or crouching and running or seeking refuge behind an object when he was struck by the bullet. This would help to ascertain the trajectory and entry of the bullet which resulted in the reported trauma. Even if the patient was an uncooperative historian - it would have been useful as high velocity bullets are
quite destructive as per mention in the discussion and the authors believe that the kinetic energy was dissipated by the associated bony injury. It could very possibly be a glancing deflected stray bullet where the victim was not the intended target.

A statement indicating that the patient was struck by the bullet while he was running seeking for refuge has been inserted in the text (case presentation, lines 74-75)

2) The associated bony injuries are not appreciated in the radiological images in the manuscript - an axial view of the CT scan showing significant destruction of the vertebral body could be demonstrated (supporting the opinion given that the high velocity kinetic energy of the bullet was dissipated by the vertebra).

A figure showing bone injuries has been inserted in the manuscript (Figure legend page 9 lines 232-235)

3) Although not clearly mentioned but when reading the manuscript as the patient was well without any evidence of sepsis after 20 days from the trauma - the bullet must have been incarcerated in the retroperitoneal region as there was no signs of visceral injury within the abdomen. Perhaps a mention of the same in the manuscript.

The suggested sentence has been inserted in the text (case presentation lines 125-127)

4) The authors could elaborate more on the surgical technique with regards the exact incision made and if they followed and exposed the projectile track to get to the bullet and control of the aorta before dealing with the projectile or avoided the tract altogether and if so what happened to the entry wound and tract.

The surgical procedure has been detailed more in the report (case presentation lines 90-93 and 98-100)

Thank you for allowing me to review this rare case and I would like to commend the authors in the excellent management of the case.

Thank you very much again for your kind comments

Mr. Dave Veerasingam FRCS (CTh)
Consultant Cardiothoracic Surgeon
University Hospital Galway
Newcastle Road, Galway,
Ireland

Megan Brenner (Reviewer 2): excellent report. great figures and explanation of case and hospital course.
is there an axial view from the CT scan that shows the bullet within the aorta to supplement the coronal and sagittal images?

Unfortunately the CT metal artifacts generated by the bullet do not allow selecting a high quality figure detailing the axial view of aorta.

perhaps add a statement in the discussion regarding other ways to investigate the layers of the aortic wall in these cases - for those who may not have CT but could use angiography and/or IVUS (eliminate scatter from the bullet for more sensitive diagnosis).

The suggested statement has been inserted in the discussion (lines 124-126)

Thank you very much for your kind suggestion that will improve significantly the manuscript