

Others - Other Abstract

[MEP-21]

Management of Cardiac Bullet Embolism Originating From the Popliteal Vein

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Intravascular missile embolism is comparatively uncommon; however, vascular injury is a frequent consequence of firearm-related accidents. To date, there have been 38 documented cases of intravascular missile embolization to the heart. This case report described the successful surgical management of a patient with a bullet embolism in the right ventricle after a gunshot injury to the left popliteal vein. A 54-year-old male presented with a gunshot wound to the left popliteal fossa. The popliteal vein, which was partially damaged, was primarily repaired. Radiological imaging, including radiographs and computed tomography, revealed the bullet's unexpected location in the apex of the right ventricle. An echocardiogram confirmed the bullet's position and showed minimal pericardial effusion. On arrival, the patient was hemodynamically stable, and lower extremity pulses were palpable, with no evidence of deep vein thrombosis or neurological deficits. Hematological studies were within normal limits. The patient underwent a left anterior minithoracotomy. Cardiopulmonary bypass was established via cannulation of the right femoral artery and vein. With the heart beating, a right ventriculotomy was performed, and the bullet was successfully removed. The ventriculotomy was closed primarily using felt patches. The postoperative course was uneventful, and the patient was stable with no signs of neurological or vascular complications and no significant pericardial effusion on follow-up echocardiography. This case highlights the importance of thorough radiological evaluation in gunshot injuries, even when the entry wound is distant from the final location of the projectile. The use of cardiopulmonary bypass can be effective in managing intracardiac bullet embolism, which is very rare. Prompt diagnosis and careful surgical planning are essential for favorable outcomes in such complex cases.

Keywords: Bullet wound, embolism, vascular injury.

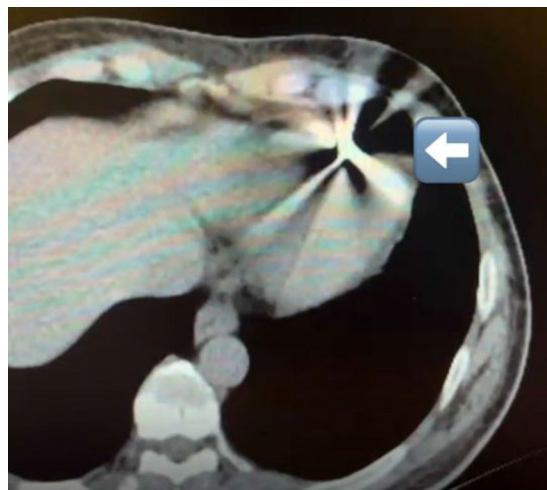


Figure 1. Computed tomography shows foreign body in cardiac apical (white arrow).

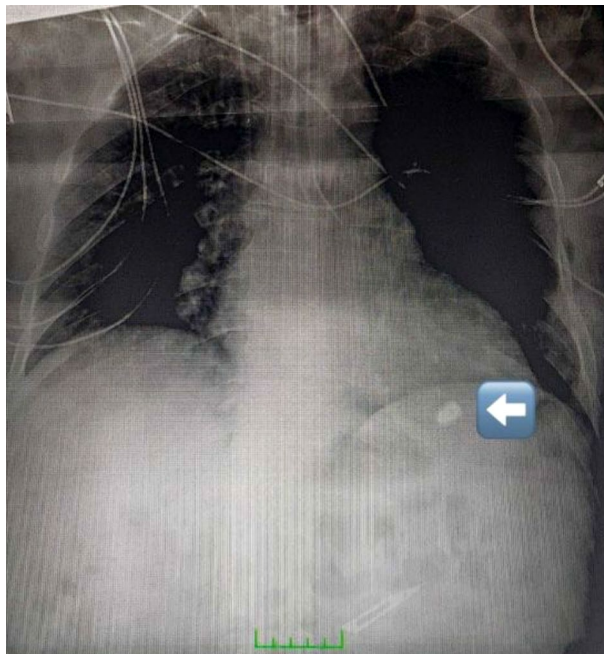


Figure 2. Chest radiograph of bullet in apex of right ventricle (white arrow).

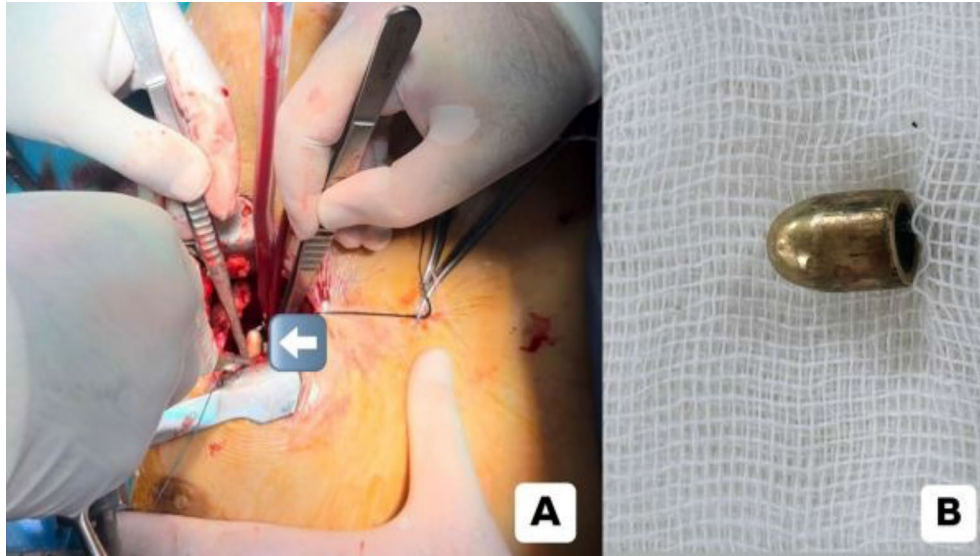


Figure 3. (A) Extracting the bullet from right ventricle (arrow). (B) The extracted bullet.

References

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