



Penetrating Cardiac Nail Gun Injury

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Clinical Image

Nail-gun injury affecting the heart is fairly rare and which is potentially fatal and requires expedient operative management [1,2]. A 24-year-old decorator was admitted emergency to our department for an accidental nail-gunshot injury of the chest 3 h ago. His physical examination showed a punctiform entrance wound at the plane of nipple, 1 cm lateral to the midline (Figure 1) and without symptoms of cardiac tamponade. The high resolution computed tomographic scan imaging revealed a 3 cm nail traversing the sternum and penetrating the anterior myocardium of the right ventricle (Figure 2). Without using cardiopulmonary bypass, a right anterior thoracotomy in the fourth inter costal space was performed. Only a 5-mm laceration of the anterior right ventricle was visualized just below the right atrioventricular groove by the tip of nail (Figure 3). The nail was pushed outward from the thoracic cavity and was removed. The myocardium was repaired with a 4-0 prolene purse string suture, a drain was placed. Postoperative echocardiography showed intra

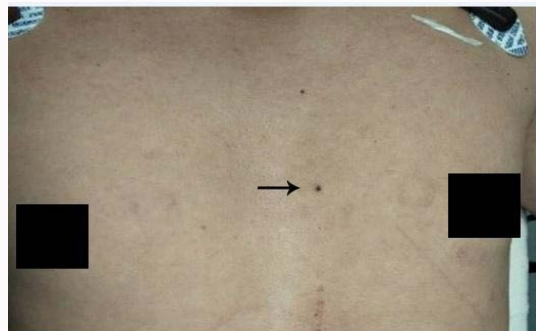


Figure 1: A punctiform entrance wound at the plane of left nipple.

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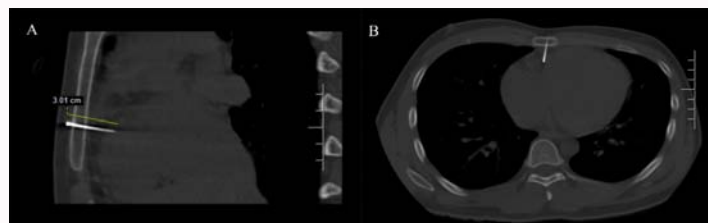


Figure 2: High resolution computed tomographic: Median sagittal section (A) and transverse section (B) imaging demonstrating a long 3-cm nail in the mediastinum.

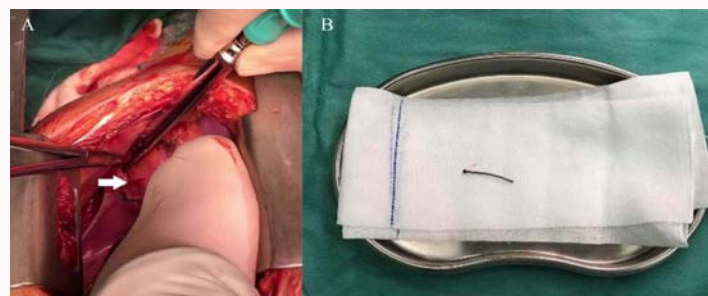


Figure 3: Laceration of the anterior right ventricle (A arrows) and the nail (B).

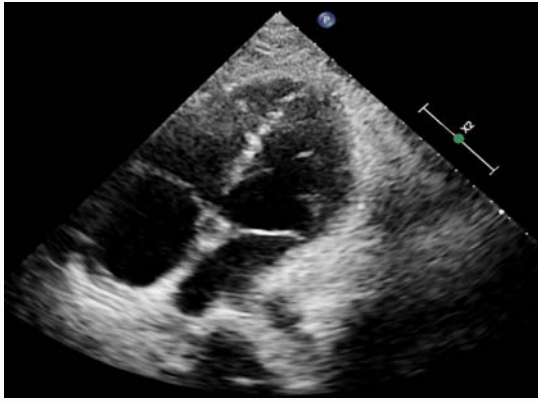


Figure 4: Transthoracic echocardiography showing intra-cardiac structure intact.

cardiac structure intact (Figure 4). After an uneventful recovery the patient was discharged home on the third postoperative day.

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