A retrosternal hematoma presenting as cardiac tamponade after a penetrating chest injury

Penetran göğüs travması sonrasında kardiyak tamponad ile seyreden retrosternal hematom

Kamil Boyacıoğlu, Nihan Kayalar, Berk Özkaynak, İbrahim Yıldızhan, Vedat Erentuğ

Department of Cardiovascular Surgery, Bağcılar Training and Research Hospital, İstanbul, Turkey

A 49-year-old man was admitted to our hospital because of an anterior chest wall stab wound. He was conscious but had dyspnea and orthopnea, and his blood pressure was 70/40 mmHg with a pulse rate of 125/minute. The wound was at the right edge of the sternum and sixth intercostal space. Echocardiography was performed, and there were no significant findings in the intrapericardial space. After that, the patient underwent computed tomography (CT) to evaluate the mediastinal and thoracic structures, and the presence of a retrosternal hematoma with cardiac compression was revealed by computed tomographic angiography (Figures 1 and 2). The patient then was immediately taken to the operating room where the hematoma was removed via a median sternotomy and the bleeding from left internal mammary artery was stopped.

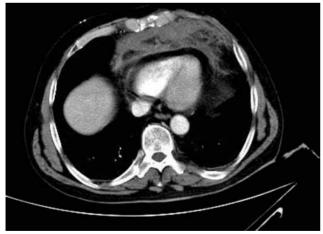


Figure 1. The horizontal axis view demonstrates the huge retrosternal hematoma pressing on the heart.

The pericardium was intact, so it was opened with a small incision to view the intrapericardial space. The pericardial cavity was clean, and the incision was then sutured completely. On the postoperative fourth day, the patient was discharged uneventfully.

Extrapericardial hematomas can cause cardiac tamponade^[1-3] and CT is able to clearly show the compression of the heart.^[3] When echocardiographic involvement cannot be satisfactorily diagnosed,



Figure 2. A sagittal axis view of the retrosternal hematoma.



Available online at www.tgkdc.dergisi.org doi: 10.5606/tgkdc.dergisi.2014.9477 QR (Quick Response) Code Received: November 03, 2013 Accepted: December 18, 2013 Correspondence: Kamil Boyacıoğlu, M.D. Bağcılar Eğitim ve Araştırma Hastanesi, Kalp ve Damar Cerrahisi Kliniği, 34200 Bağcılar, İstanbul, Turkey. Tel: +90 505 - 494 99 59 e-mail: kamilboyacioglu@yahoo.com.tr CT can be utilized in patients who are hemodynamically stable. $\ensuremath{^{[4]}}$

Declaration of conflicting interests

The authors declared no conflicts of interest with respect to the authorship and/or publication of this article.

Funding

The authors received no financial support for the research and/or authorship of this article.

REFERENCES

- Hajjar RJ, Rose GA, Madsen JC, Levine RA, DeSanctis RW. Extrapericardial cardiac tamponade after blunt chest trauma. Am Heart J 1995;130:620-1.
- 2. Cheng YC, Huang JW, Lee WC, Kuo LG, Lin TY, Shih MC. Retrosternal haematoma presenting as cardiac tamponade in a blunt trauma patient. Emerg Med J 2009;26:462.
- 3. Kim YH, Kwon JB, Park CB, Choi SY. Extrapericardial cardiac tamponade by a retrosternal haematoma after blunt chest trauma. Eur J Cardiothorac Surg 2012;41:958.
- Ayık MF, Ertugay S, Dolapoğlu A, Oğuz E, Apaydın AZ. Perikardiyal yapışıklığı olan olguda penetran kalp yaralanması. Turk Gogus Kalp Dama 2013;21:154-6.