**Case Image**

**Post-Cardiac Injury Syndrome**

**Masahiro Kashiura#, Takashi Moriya**

Department of Emergency and Critical Care Medicine, Saitama Medical Center, Jichi Medical University, Saitama, Japan

**#Corresponding author:** Masahiro Kashiura, MD, Department of Emergency and Critical Care Medicine, Saitama Medical Center, Jichi Medical University, 1-847 Amanuma-cho, Omiya-ku, Saitama-shi, Saitama 330-8503, Japan

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**Abstract**

Post-cardiac injury syndrome is caused by the combination of damage to pericardial mesothelial cells and blood in the pericardial space. We describe the case of post-cardiac injury syndrome after blunt chest trauma.

**Case Presentation**

A 32-year-old man presented with chest contusions. Chest computed tomography showed a sternal fracture (Figure 1A), bilateral hemothorax, and a hematoma behind the sternum without pericardial effusion (Figure 1B). His serum creatine kinase-MB level was 125 IU/L. On the 5th day, he underwent a hematopoietic fixation for the sternal fracture. On the 17th day, echocardiography results were unremarkable, and the patient was discharged. However, 36 days after the injury, the patient returned to the emergency department with chest pain. Echocardiography (Figure 1C) and chest computed tomography ((Figure 1D), arrowhead) revealed pericardial effusion, consistent with post-cardiac injury syndrome. The pericardial effusion decreased after 14 days of treatment with an oral Non-Steroidal Anti-Inflammatory Drug (NSAID) (loxoprofen, 180 mg per day).

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**Figure 1:** **A)** Chest computed tomography on the day of injury shows a sternal fracture. **B)** Chest computed tomography on the day of injury shows bilateral hemothorax and a hematoma at the posterior aspect of the sternum. **C)** Chest computed tomography 36-day after the injury pericardial effusion. **D)** Echocardiography reveals pericardial effusion (arrowheads).

**Discussion**

Post-cardiac injury syndrome is caused by the combination of damage to pericardial mesothelial cells and blood in the pericardial space [1]. NSAIDs are the primary treatment for post-cardiac injury syndrome, with the duration of treatment and tapering of medication based on the persistence of symptoms [2].

**Disclosures**

**Approval of the Research Protocol**

N/A.

**Informed Consent**

Written informed consent was obtained from the patient.

**Registry and the Registration No. of the Study/Trial**

N/A.

**Animal Studies**

N/A.

**Conflict of Interest**

None.

**Author Contributions**

All authors gave final approval and agreed to be accountable for all aspects of the Case Image. MK contributed to patient care, conception of work, drafting, interpretation of findings, and obtained informed consent. TM contributed to conception of work, drafting, interpretation of findings, and critically revising.

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**References**

1. [Khan AH (1992) The postcardiac injury syndromes. Clin Cardiol 15: 67-72.](https://onlinelibrary.wiley.com/doi/abs/10.1002/clc.4960150203)
2. [Adler Y, Charron P, Imazio M, et al. (2015) 2015 ESC Guidelines for the diagnosis and management of pericardial diseases: The Task Force for the Diagnosis and Management of Pericardial Diseases of the European Society of Cardiology (ESC) Endorsed by: The European Association for Cardio-Thoracic Surgery (EACTS). Eur Heart J 36: 2921-2964.](https://academic.oup.com/eurheartj/article/36/42/2921/2293375)