

## Short Report

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# Intersternal stomach hernia

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### Abstract

Sternotomy is the primary surgical procedure used to access the heart and great vessels. Sternal dehiscence is known as sternal non-union, and it is a severe complication of sternotomy. Incisional hernias are a recognized complication following a median sternotomy, but a stomach hernia that started from a high level of dehiscence of the sternum is very rare.

We aimed to present a case with stomach hernia after median sternotomy who has been living peacefully for a long life with this sac.

**Keywords:** Sternotomy; Sternal dehiscence; Stomach; Hernia.

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### Introduction

Sternal Dehiscence (NISD) is known as sternal non-union, and it is a severe complication of sternotomy closure that can be seen after open heart operations. In the literature, healing complications have been reported in 0.3% to 5% of cases and are associated with a 14-47% mortality rate if mediastinitis supervenes [1,2]. Subxiphoid incisional Hernias (SIH) are a recognized complication following a median sternotomy, but a stomach hernia that started from a high level of dehiscence of the sternum is very rare. We aimed to present a case with stomach hernia after median sternotomy who has been living peacefully for a long life with this sac.

### Case presentation

A 66-year-old man with COPD was admitted to our clinic with complaints of chronic cough and dyspnea. We noted a large sac extending from the sternum incision to the abdomen during inspection (Figure 1). He had undergone a sternotomy for coronary artery bypass graft ten years ago. But Non-Infectious Sternal Dehiscence (NISD) was developed after surgery. The obvious

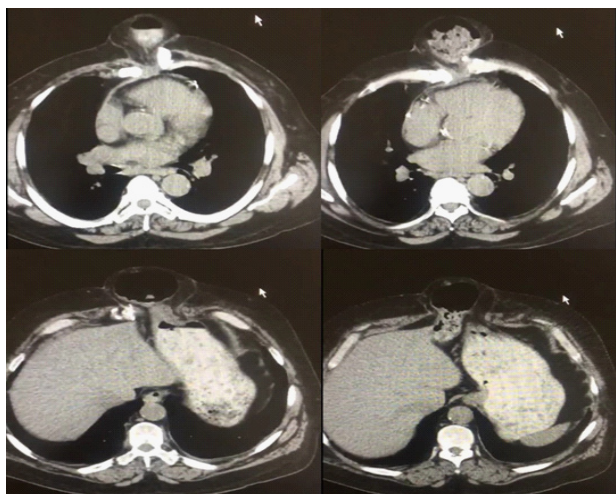
sternal separation was observed during physical examination with a cough. In the videos of the patient, an obvious separation of the dehiscenced sternum with omentum and stomach hernia during cough from the upper levels of the non-union sternum. Thoracic CT images (Figure 2) showed chronic sternal non-union with gastric herniation through a sternal defect without evidence of strangulation. The patient reported that she had been living without complications for a long time. The patient refused any surgical intervention, including the repair of sternal non-union and hernia. Informed consent was obtained from the patient for presentation.

### Discussion

Sternal Dehiscence (NISD) is known as sternal non-union, and it is a severe complication of sternotomy closure that can be seen after open heart operations. In the literature, healing complications have been reported in 0.3% to 5% of cases and are associated with a 14-47% mortality rate if mediastinitis supervenes. According to the literature, obesity, diabetes mellitus, osteoporosis, and prior sternotomy increase the incidence of sternal non-union. However, we suggest that the most common



**Figure 1:** A large sac is showing extending from the sternum incision to the abdomen during inspection.



**Figure 2:** Thoracic CT images show chronic sternal non-union with gastric herniation through a sternal defect.

cases with dehiscence of the sternum are caused by COPD and chronic cough. The therapeutic approach focuses on addressing the presence of infection, removing the necrotic tissue, and then covering the area with highly vascularised tissue [1-4]. But in our case, there was no infectious complication, and he did not accept any surgical intervention.

### Conclusion

In conclusion, while anatomically unbelievable, a stomach hernia that caused a non-union sternum after open heart surgery can persist for many years without complications. However, surgical repair is highly recommended.

### Declarations

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**Availability of data and materials:** The data generated in the present study may be requested from the corresponding author.

**Authors contributions:** DO, CB, and SO contributed to the case management, writing of the case report with figures, videos, and data collection of the manuscript.

**Patient consent for publication:** Not applicable.

**Ethics approval and consent to participate:** Not applicable.

**Competing interests:** The authors declare that they have no competing interests.

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