# Delayed Presentation of a Bochdalek Hernia in an Adult Female

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## Abstract

Bochdalek hernias are congenital defects most commonly observed at birth and rarely remain asymptomatic into adulthood. As a result of failed fusion of the posterolateral diaphragmatic foramina, abdominal organs can protrude into the thoracic cavity[1]. When Bochdalek hernias become bothersome, patients may complain of vague pulmonary or gastrointestinal dysfunction with features akin to bowel obstruction. Various surgical methods to repair this hernia type have been documented in literature and are approached through the thoracic or abdominal cavity with subsequent return of organs to the abdominal cavity and reapproximation and repair of the diaphragmatic defect[2]. We present a case of a 56-year-old female who presented to the Emergency Department (ED) with 3 days of gastrointestinal symptoms.

## Case Report

A 56-year-old female with no significant surgical history presented to the ED with nausea, vomiting, and acute abdominal pain radiating to the back that was minimally relieved by nasogastric tube placement. She had been also experiencing decreased stool frequency and flatus. She had been seen in the ED on multiple occasions for similar complaints. A portable chest X-ray showed the distal gastric bulb to be in the left hemithorax and was supported by the following CT findings. A computed tomography (CT) scan of the abdomen and pelvis confirmed an obstructed-appearing mesentero-axial gastric volvulus with one-third of the stomach herniating through a 3-4 cm left-sided Bochdalek hernia. The subdiaphragmatic stomach was markedly distended. The surgery team evaluated the patient and she was promptly taken to the operating room for repair of the Bochdalek hernia.

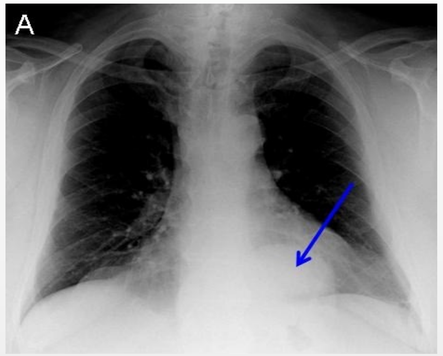



**Figure 1A.**
PA Chest x-ray demonstrating left lower lobe herniation[5].

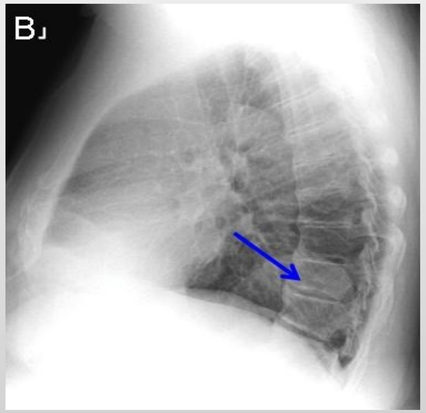



**Figure 1B.**
Lateral Chest x-ray demonstrating left lower lobe herniation[5].

## Operative Report

A midline incision was made from the subxiphoid to the umbilicus. The acutely distended stomach was reduced and there were no ischemic signs. The diaphragmatic muscle was healthy and 3 interrupted 0 Ethibond sutures were placed on each side to close the hernia. Adhesions approximating the hernia defect were lysed. The stomach was anchored to the abdominal wall with 3 interrupted 2-0 nylon sutures on all sides to prevent re-herniation. The fascia was closed with a 0 looped PDS suture. The skin was closed with staples. The patient made an unremarkable post-operative recovery.

## Discussion

Reported initially in 1848 by Vincent Bockdalek, these hernias result from in-utero failure of posterolateral diaphragmatic foraminal fusion. Abdominal viscera are subsequently allowed to protrude into the thoracic cavity and commonly cause abdominal sequelae and respiratory stress from mechanical compression. Evaluation of the patient involves a detailed physical examination and imaging such as CT scans or x-rays. CT scan has shown to have 78% sensitivity for left sided hernias[3]. Surgical treatment aims to reduce the herniated contents and close the defect. Intra-operatively, the viscera should be examined thoroughly for necrosis and ischemia. Open transthoracic or transabdominal approaches are recommended for surgical repair in symptomatic patients with known prolapse and adhesions[2]. Our case report strives to demonstrate the importance of a thorough evaluation of all patients, leading to early diagnosis and prompt surgical intervention in the treatment of delayed presentation of Bochdalek hernia.

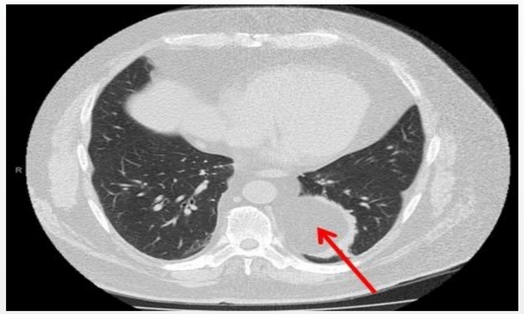


**Figure 2.**
Chest CT demonstrating left lower lobe opacity consistent with Bochdalek hernia[5].

## References

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