H96 A Lesson Learned From a Case of Unexpected Death of a 73-Year-Old Woman Due to a Congenital Diaphragmatic Hernia

Silvia D. Visona, MD, University of Pavia, Via Forlanini 12, Pavia 21100, ITALY; Fiorella Lanzillotta, MD, University Center of Legal Medicine, Via Forlanini 12, Pavia 27100, ITALY; Luisa Andrello, MD, Henri Guisan Street, 3, Bellinzona, Canton Ticino 6500, SWITZERLAND; Gulnaz T. Javan, PhD, Alabama State University, Forensic Science Program, 915 S Jackson Street, Montgomery, AL 36104; Antonio M.M. Osculati, MD, University of Pavia, Via Forlanini 12, Pavia 27100, ITALY; and Matteo Moretti, MD*, Department of Forensic Medicine, Via Forlanini 12, Pavia 27100, ITALY*

After attending this presentation, attendees will understand that a diaphragmatic hernia can be a life-threatening condition even in adult patients, as it may remain silent until the onset of serious consequences. These cases might come to the pathologist's attention as unexplained and unexpected deaths.

This presentation will impact the forensic science community by highlighting the need for surgeons to be vigilant regarding congenital internal hernias, as they may become symptomatic later in life. This condition usually presents in the newborn. A few cases may present in older patients, often with non-specific symptoms that make the diagnosis difficult. This study reports a rare presentation of congenital diaphragmatic hernia in a 73-year-old woman.

On a Saturday, a 73-year-old woman was admitted to the emergency department presenting nausea with dark vomiting that had been on-going for several hours. The patient also reported an episode of transient loss of consciousness. The clinical evaluation did not point out anything remarkable, except abdominal tenderness. Laboratory investigations did not reveal any pathological results; no chest radiograph or abdominal echography was performed. Considering the symptoms reported by the woman, a peptic ulcer disease with hematemesis was suspected and the patient was informed about the need to undergo an Esophagogastroduodenoscopy (EGDS); however, the procedure was planned for the following Monday, two days after the symptoms began. In the following hours, the woman, who had been moved to a surgery department, complained of severe abdominal pain, associated with repeated "coffee ground" vomiting. Details concerning the patient's condition were not reported on her medical chart and no medical measures were taken, except for antisecretory drug therapy and parenteral nutrition. Suddenly, on Monday morning, the woman had several episodes of projectile vomiting and became hemodynamically unstable, with a subsequent cardio respiratory arrest. The patient could not be revived despite all resuscitative measures.

A forensic autopsy was performed to determine the cause of death. The gross examination revealed a wide-neck defect of the left diaphragm with herniation of the fundus of the stomach into the left thoracic cavity, covered by a membranous sheet of tissue (hernia sac). Only mild intrathoracic adhesions were present, and the herniated contents could be easily reduced to the abdomen. The size of the defect was 8cm x 6cm. An atelectasis of the left lung's lower lobe was also observed. The stomach presented an altered shape, with no other pathological findings, neither macroscopic nor microscopic. The gastric content consisted of partially digested food.

Therefore, the cause of death could be identified as a cardio-respiratory arrest due to the compression of the left lung and heart by the large diaphragmatic hernia, which was classified as a posterolateral (Bochdalek) congenital hernia. Considering the cause of the death, provided by the evidence from the forensic autopsy, a medical mistake was identified regarding the diagnosis and treatment of this patient. Although it is documented that the clinicians first addressed their suspicions toward a peptic ulcer, by focusing their choices entirely on this hypothesis, they failed to follow the recommended protocol in cases of hematemesis (which specifically suggests an EGDS within 24 hours). Therefore, the doctors' behavior has to be considered negligent, as a large diaphragmatic hernia was missed.

The death of the patient was preventable with an accurate physical examination and further diagnostic exams, which would have allowed an early diagnosis and adequate treatment; however, because of the rarity of the onset of symptoms due to this condition in older patients, and the non-specificity of the symptoms presented, this condition was not considered by clinicians.

Diaphragmatic Hernia, Unexpected Death, Medical Responsibility