



H134 An Exceptional Case of Acute Respiratory Failure Caused by Intra-Thoracic Gastric Perforation Secondary to Overeating

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After attending this presentation, attendees will better understand a very rare and devastating mechanism of death, including autopsy findings and related patient history, allowing them to completely and efficiently assess similar cases.

This presentation will impact the forensic science community by reporting a very well-documented case of gastric perforation due to overeating in a psychiatric patient that resulted in death. This study provides information regarding a rare occurrence reported through the clinical history and the results of the forensic investigation, providing an in-depth and complete point of view.

An 18-year-old female patient arrived at the emergency department complaining of feeling abdominal pain and fullness after a heavy meal. She reported a history of *anorexia nervosa* without previous abdominal surgery. At the physical examination, she was reported to be filthy with feces and had a severe abdominal distension with dull percussion and mild abdominal tenderness in the epigastric region. Intestinal sounds were absent. She also reported intermittent nausea without vomiting. A total body computed tomography revealed massive stomach dilatation. The stomach occupied the abdominal cavity and the left hemi-thorax. Physicians began an intravenous fluid replacement and attempted to place a nasogastric tube; however, during the maneuver, a generalized seizure occurred, followed by cardio-respiratory arrest. A diagnostic autopsy was requested by the hospital. During the autopsy, the pathologist observed a significant dilation of the anal sphincter; suspecting a sexual assault, the judicial authorities were alerted, as required by Italian law. The case was assigned to the Legal Medical Department for a forensic autopsy. During the second autopsy, an anal orifice expansion (3.5cm x 25cm), with no signs of violence, was observed; food was found in the epiploon retrocavity. The stomach was hyper-distended and perforated at three different points; the diaphragm was also perforated. The left lung was completely collapsed and was covered with traces of food.

The history of *anorexia nervosa*, clinical objectivity, and autopsy evidence led to the suspicion of an intra-thoracic gastric perforation secondary to acute massive dilation of the stomach due to overeating. Diaphragmatic perforation caused by the stomach is a less-common complication than gastric perforation in patients with eating disorders. Physicians must have knowledge of this complication in order to reach a quicker diagnosis, perform a timely intervention, and provide patients with all necessary information regarding possible risks. Medical-legal aspects of this event though a comparison with scientific literary evidence will be discussed.

Respiratory Failure, Gastric Perforation, Overeating