Right intrathoracic stomach with gastric torsion demonstrated by CT

Published on 27.01.2010

DOI: 10.1594/EURORAD/CASE.8191
ISSN: 1563-4086
Section: Abdominal imaging
Case Type: Clinical Cases
Authors: Petsatodis E, Anastasiadou K, Voultsinou D, Avramidis O, Tsanaktsidis I, Palladas P
General Regional Hospital G Papanikolaou, Thessaloniki, Greece.
Patient: 65 years, female

Clinical History:

A 65 year old female, with a history of breast cancer, was admitted to our hospital with abdominal pain and vomiting. A computed tomography (CT) scan was performed and the findings are presented.

Imaging Findings:

A 65 years old female with a history of breast cancer was admitted to our emergency department complaining about abdominal pain and vomiting. On clinical examination there was epigastric tenderness. Bowel sounds were present. The patient was haemodynamically stable.

The patient underwent computed tomography examination. At non-contrast enhanced CT examination (Figure1), the fundus of the stomach was illustrated at the right chest cavity and part of the body was seen at the left chest cavity. The diaphragm was demonstrated and the stomach was located behind it (Fig 2). The hiatal hernia aperture was also detected (Fig 3). The gastric torsion was clearly demonstrated by CT. (Fig 4-5). Our findings were compatible with a right intrathoracic stomach secondary to hiatal hernia with gastric torsion. The torsion was organoaxial as the stomach rotated along its longitudinal axis. No signs of obstruction were noticed.

An operation was performed and the stomach was repaired.

Discussion:

A right intrathoracic stomach is a rare condition that is usually a result of a congenital para-oesophageal hiatal hernia and occurs when a large portion of the stomach is herniated into the chest cavity. The para-oesophageal hiatal hernia is a rare disorder that represents approximately the 5% of all diaphragmatic hernias and heredity factors were responsible for this entity.

As the stomach herniates into the chest it also rotates. The stomach most frequent rotates along its longitudinal axis leading to organoaxial torsion. The second type of torsion is the mesenteroaxial torsion. In this condition the stomach rotates 90° along the longitudinal axis and can lead to an upside down stomach.

Patients with right intrathoracic stomach are usually discovered in childhood and their symptoms become chronic as a result of the incompetent gastrooesophageal junction, including mild abdominal or epigastric pain and vomiting. The symptoms become more severe when the torsion leads to strangulation and obstruction, a situation known as volvulus. The clinical presentation depends on the degree of the obstruction. In gastric volvulus severe epigastric pain, violent retching and the inability to pass nasogastric tube in the stomach are the classic triad. Acute gastric volvulus is an emergency condition that should be treated surgically or else it can be even fatal.

Right intrathoracic should be differentiated from a Morgani’s hernia, and the right Bochdalek’s hernia.

As a conclusion we can say that the early recognition of such hernias by the radiologist is of vital importance.
because an asymptomatic patient can be directed to surgery before any life threatening complications occur.

**Differential Diagnosis List:** Right intra thoracic stomach secondary to paraesophageal hiatal hernia and organoaxial torsion.

**Final Diagnosis:** Right intra thoracic stomach secondary to paraesophageal hiatal hernia and organoaxial torsion.

**References:**


Huang SY, Levine MS, Rubesin SE, Katzka DA, Laufer I (2007), Large hiatal hernia with floppy fundus: Clinical and radiographic findings. AJR Am J Roentgenol 188(4):960-4. (PMID: 17377030)


Description: Right chest cavity location of the stomach fundus. Part of the body is seen at the left chest cavity. Origin:
Figure 2

Description: Postero-diaphragmatic stomach location. Origin:
Figure 3

Description: Hiatal hernia aperture is illustrated. Origin:
Figure 4

Description: Torsion is demonstrated. Origin:
Figure 5

Description: Coronal: torsion is demonstrated.

Origin:

Description: Sagittal: torsion is demonstrated.

Origin: