Case	(152) Massive dilatation of the stomach as a cause of compartment syndrome in bulimic patient
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CASE PRESENTATION

A 47-year-old female diagnosed of bulimia nervosa was brought to the emergency department with severe abdominal pain. The patient reported having eaten compulsively hours before. On physical examination the patient was pale and sweating.

The abdomen was distended with generalized rigidity and tympanic percussion. Femoral and dorsal pedis pulses where absent and the neurological examination demonstrated sensory loss below T8 dermatome. Initial laboratory tests were normal. Contrast enhanced thoracoabdominal CT showed a massively distended stomach with abundant content. It was causing an important mass effect on surrounding structures displacing backwards the kidneys, the spleen and the pancreas; the liver was displaced cranially. The inferior vena cava was collapsed and the aorta was not opacified below the level of the eleventh thoracic vertebra and neither its principal branches were opacified.

The small bowel loops were slightly dilated. An emergency midline laparotomy was practiced. The stomach was extremely dilatated occupying a large part of the abdominal cavity and the small intestine and colon loops where distended presenting an ischemic appearance. After the decompression blood analysis showed severe acydosis (lactate 20 mmol/L -1).

Few minutes later, the patient presented cardiorespiratory arrest and the intensive care unit staff started with the cardiorespiratory resuscitation maneuvers without being able to resuscitate the patient.

DISCUSSION

Some patients with Anorexia Nervosa or Bulimia Nervosa have the risk of developing severe gastric dilatation. In these patients large periods of starvation induce atony of the stomach and the gastric emptying is abnormally slow because of the alteration of autonomic nervous function. In consequence, as in our case is possible to have a severe gastric dilatation.

The stomach compresses the inferior vena cava and the Aorta causing a fall in cardiac output and organ hypoperfusion. So the patient has ischemia in the lower limbs, abdominal and pelvic organs, resulting in anaerobic metabolism and accumulation of lactate.

With the laparotomy, the metabolites were released into the circulation with resultant decreases in systemic vascular resistance, producing shock and decreased myocardial contractility. So the rapid decompression of the stomach produced gross cardiovascular compromise, multiorgan failure and eventually death.

CONCLUSION

We have to keep in mind that in this type of patients we can have a massive gastric dilatation that produces compartment syndrome and as a result a huge cardiovascular compromise. The CT will help us to diagnose the dilatation and the cardiovascular compromise.

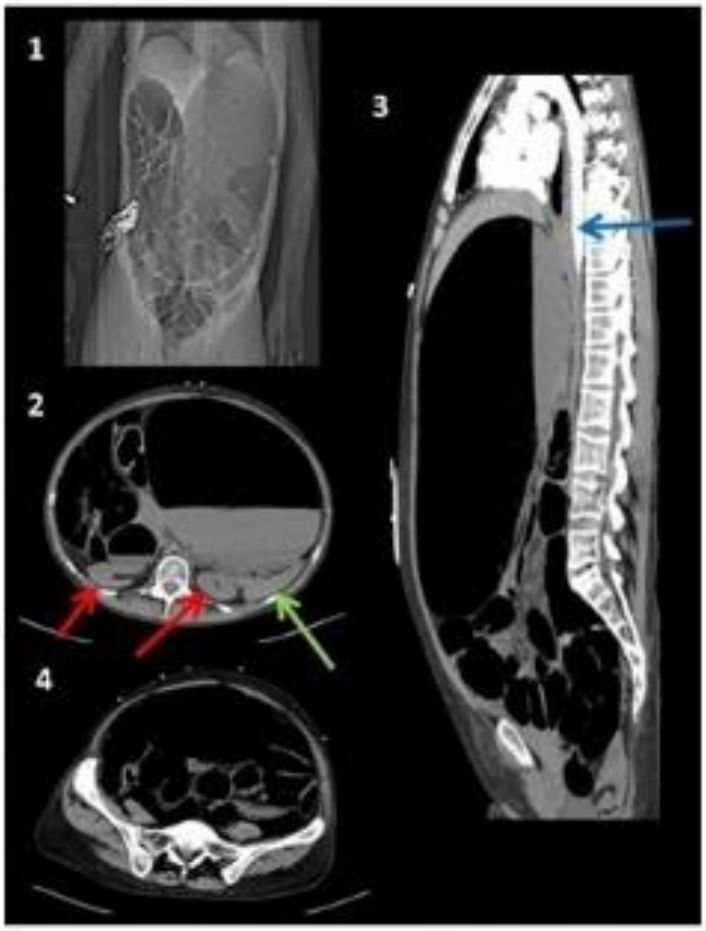

Fig. 1. CT thoracoabdominal scout view shows a massive gastric dilatation. Fig. 2. Axial CT scan reveals the gastric dilatation with abundant content and the displacement of the kidneys (red arrows) and the spleen (green arrow). Note that these organs are not enhanced and the absence of opacified aorta and flattened IVC. Fig. 3. Sagital reconstruction shows how the aorta is narrowed and is not opacified below T-11. Fig. 4. Dilatation of small bowel loops.

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