LETTER TO THE EDITOR / Gastrointestinal imaging

An unusual and serious cause of gastritis: Emphysematous gastritis

A 39-year-old male patient with no past medical history was referred with complaints of severe epigastric pain, nausea and vomiting. The patient had eaten pickles one day before. Physical examination was normal with no abdominal rebound defence. Abdominal ultrasonography did not show any signs of acute cholecystitis, appendicitis or pancreatitis. Since echo could not identify the cause of his pain, abdominal computed tomography (CT) was requested. CT showed a thickened stomach wall (17 mm) appropriate for emphysematous gastritis (EG), thickened-roughened appearance of stomach pleats and millimetric images of gas observed within the thick muscle layer (Figs. 1–3). No gas was found in the portal venous system. Laboratory results supported infection, with high CRP (7 mg/dL, range <1 mg/dL) and leukocytosis (12.00 K/mm³; range 4.50–11.00 K/mm³). Oral intake was restricted and 7 days piperacillin-tazobactam 8 h/day, 4.5 g and ciprofloxacin 12 hour/day, 400 mg antibiotic therapy was begun. The patient’s abdominal pain began to resolve after 48 h. An endoscopy performed on the 3rd day showed a widespread erythematic region in the gastric antrum (Fig. 4). Culture of a stomach mucosal sample taken during the endoscopy produced Gram-positive anaerobic spore-forming bacillus. After the 3rd day, the patient was allowed oral intake and antibiotic treatment was completed on the 14th day. A check-up CT on the patient with fully resolved clinical and laboratory results showed the stomach wall had normal thickness and did not contain gas. After the case received successful treatment with early diagnosis through clinical and radiological results, he responded fully and was discharged. On the 2nd month of follow-up, the patient was found to be healthy and without symptoms. Diagnosis of emphysematous gastritis was made according to the patient’s clinical and radiological results.

In patients with acute onset abdominal pain, the etiology may be caused by EG linked to a variety of causes. EG is a rarely seen infectious disease that may cause mortality. EG is an emergency pathology that may cause a variety of complications, even mortality. Diagnosis is by imaging the gas within the stomach wall. EG is a rare form of gastritis caused by an invasion of gas-producing organisms [1]. The risk factors for EG include diabetes, alcohol addiction,

Figure 1. Abdominal computed tomography, axial image showing clear thickening (arrows) of the large curvature of the stomach wall.

Figure 2. Abdominal computed tomography, axial slice, clear thickening of the large curvature of the stomach wall, hypertrophic appearance of the stomach pleats (white arrows), images of millimetric gas within the muscle layer (empty arrows).
malignancy, abdominal surgery, corrosive acids, alcohol or anti-inflammatory treatment [2]. In our patient, there was a history of eating an acid-containing food, pickles, one day previously.

In EG, gas-producing organisms invade the stomach wall forming a rare stomach infection. Generally, it has high mortality and if sepsis is not controlled by medical management or if severe necrosis is present, development of stomach perforation may be prevented by surgical intervention. Even with surgical intervention such as gastrectomy, mortality is elevated with a rate as high as 62% [3]. However, as in our patient, early diagnosis and full response to medical treatment before development of complications is possible.

Conclusion

In conclusion, emphysematous gastritis is a rarely seen condition with possible mortal clinical results. As in our patient, in cases with persistent abdominal pain early use of imaging methods and early treatment may be life saving.

Disclosure of interest

The authors declare that they have no conflicts of interest concerning this article.

References


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