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Occlusive Syndrome Revealing Emphysematous Gastritis: A Case Report

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Abstract **Case Report**

Emphysematous gastritis is a rare form of infection affecting the gastric wall, characterised by the presence of gas in the wall caused by gas-producing bacteria. This entity was first described by Fraenkel in 1889. Its prognosis is poor with a very high mortality, requiring early diagnosis and treatment. The clinical picture is not specific. Imaging plays an essential role in the diagnosis and the therapeutic management is essentially based on antibiotics in the absence of complications. We report the case of a 29 years old female patient with no specific pathological history who was admitted with a febrile obstruction syndrome. The diagnostic approach confirmed emphysematous gastritis.

Keywords: Pneumoperitoneum, Gastritis, Emphysematous.

INTRODUCTION

Emphysematous gastritis is a rare but severe form of gastritis. It is caused by the invasion of the stomach wall by gas-producing bacteria, mainly Clostridium. In 1889 Fraenkel gave the first clinical description of the disease as a form of gastritis. Since then, a few cases of emphysematous gastritis have been described in the literature. Radiologists were able to detect the disease for the first time in 1946.

Of the hollow abdominal organs, the stomach is the one most rarely affected by inflammation. This entity mainly affects diabetic patients.

The diagnosis is difficult given the clinical picture which is not specific and the imaging essentially based on the CT scan makes it possible to rectify the diagnosis.

Management is essentially medical in the absence of complications and is based on antibiotic therapy and symptomatic treatment. Surgery is necessary in case of complications (peritonitis by perforation...).

Early management of emphysematous gastritis improves the prognosis, which becomes poor if diagnosis and management are delayed, with a very high morbidity and mortality rate in the presence of associated defects.

OBSERVATION

We report the case of a 29-year-old female patient with no previous pathological history, admitted to the emergency department with an occlusive syndrome consisting of abdominal pain, vomiting, cessation of feces and gas for 10 days and abdominal distension, all evolving in a context of feverish sensations and altered general condition.

On clinical examination the patient was conscious, hemodynamically and respiratory stable with a temperature of 38.5°C.

Abdominal examination revealed significant abdominal distension with generalized guarding. The hernial orifices were free and digital rectal examination found an empty rectal ampulla.

The biological work-up showed a frank biological infectious syndrome with a predominantly neutrophilic white blood cell count of 23000 and a CRP of 260.

An abdominal CT scan with injection was performed and showed significant gastric distension complicated by parietal pneumatosis with pneumoperitoneum and small peritoneal effusion (figure 1). This distension was responsible for posterior reflux of the intra-abdominal organs.

The patient was taken to the operating room; the procedure consisted of an aspiration of the effusion, fundiplicature opposite the area of pneumatosis at the greater curvature with Gastroprexia, then a washout and drainage by Redon drain.

The patient was put on bi-antibiotic therapy, analgesics, and rehydration and dressing changes twice a day with a clear improvement in the biological aspect.

Post-operative care was straightforward. She was discharged on the fifth day. The diagnosis of emphysematous gastritis was made on the basis of clinical, biological and CT findings, surgical exploration and, above all, the evolution under antibiotic treatment.

DISCUSSION

Emphysematous gastritis is characterised by the presence of gas within the gastric wall, due to an infection by "gas-producing" germs (streptococci, Escherichia Coli, Clostridium Perfringens...). It is accompanied by a high mortalitý, requiring early diagnosis and treatment. Several predisposing factors have been described such as ingestion of erosive substances, alcoholism, recent abdominal surgery (surgery for complicated gastric or duodenal ulcers, gangrenous colitis, intestinal obstruction or peritonitis), acute gastroenteritis, diabetes, immunosuppression, acute pancreatitis, gastric infarction, phytobezoar, ulcerated gastric cancer, anti-inflammatory treatment, acute gastroparesis (e.g. in a psychiatric context), purulent pleurisy, cocaine use [1-3].

The clinical picture is not specific (sepsis, severe abdominal pain, haematemesis, hyperleukocytosis, or metabolic acidosis). In our patient, the mode of onset was an occlusive syndrome.

The diagnosis is often made radiologically by the demonstration of gas within the gastric wall, particularly on abdominal CT.

In the face of this appearance, it is important to be able to rule out some potentially confusing diagnoses, notably gastric emphysema after gastroscopy which may present with an identical appearance and in this case the absence of an infectious/inflammatory syndrome may guide the diagnosis. Phlegmonous gastritis is also a differential diagnosis and the absence of gas within the wall could be a key determinant of the diagnosis [1].

Perforation is the final stage with the occurrence of peritonitis and is therefore a therapeutic emergency. Thus, when there is no sign of perforation, medical treatment should be implemented with the aim of controlling the state of shock with broad spectrum antibiotic therapy that should cover gram-negative germs and anaerobes [1, 4].

Surgery is indicated as an emergency measure in cases of necrosis, perforation, peritonitis or rapid deterioration of the patient's condition under medical treatment. At this stage, spontaneous evolution without surgery always leads to death [5]. In our patient, the presence of an associated pneumoperitoneum was a very suggestive sign of perforation, which required surgery.

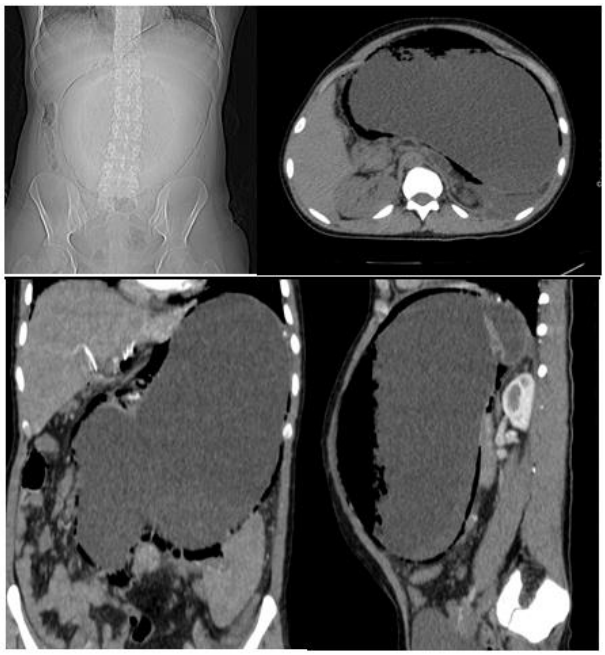

Fig-1: CT scans A) Topogram showing a bulky opacity surrounded by a clear aeric border. B) Axial section C) Coronal section and C) Axial section showing significant gastric distension with diffuse parietal pneumatosis with pneumoperitoneum (arrow)

CONCLUSION

Emphysematous gastritis is a rare entity characterised by the presence of air within the gastric wall. Several factors, both infectious and non-infectious, are implicated. The clinical presentation is polymorphic and may be an occlusive syndrome as in our case. The positive diagnosis is made on CT scan and emergency surgical management should be undertaken if there are signs of severity such as pneumoperitoneum.

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