

ABSTRACT

Gastric perforation in adolescent connected with norovirus infection

Patient: 12 years old

Symptoms: severe abdominal pain, abdominal distension, vomiting, norovirus

Clinical procedure: surgery

Aim of the study:

Gastric perforation in adolescent age is very rare medical condition. The etiology is unclear, although there are some known risk factors, for example trauma, peptic ulceration, certain medications.

The possible risk factor could potentially be gastroenteritis connected with norovirus. There are some known cases of duodenal perforation associated with gastroenteritis, but we found no cases describing acute gastroenteritis associated with gastric perforation.

The aim of our study is to present the case of gastric perforation in adolescent boy who had norovirus isolated from gastric fluid.

Case description

12-year old boy was presented to the surgical emergency in early morning hours with severe abdominal pain, accompanied with distension of abdomen and vomiting. Anamnestically there was no previous trauma, medication or ingestion of caustics. Patient was sick, having diarrhea with vomiting for 4 days before onset of severe abdominal pain. The symptoms worsened progressively, despite strong analgetic treatment. After imaging studies revealed the possibility of gastric perforation and the patient was operated. The surgery confirmed proximal gastric perforation with distal esophageal necrosis. Histology exam showed ulcerated area of peptic necrosis with neutrophils and chronic active gastritis, without *Helicobacter pylori*.

Conclusions

Spontaneous gastric perforation in children is a very rare condition, especially in otherwise healthy child. It is a surgical emergency, that we should think of, when making a diagnosis in children who present with sudden severe abdominal pain. If we have patient with norovirus infection and abdominal pain, we should think about seriously complications as gastric perforation, which is otherwise very rare.

Because of our experience we recommend that in case of gastric perforation in child, microbiological examination of gastric fluid should be done.



Figure 1: (CT) Free air and dense free fluid in the abdomen – perforation of a hollow organ. The most likely site of perforation is on the antero-lateral-superior left side of the stomach, where the wall does not stain with contrast, and air is visible in the wall.



Figure 2: (US) Free air and dense free fluid in the abdomen – perforation of a hollow organ. The most likely site of perforation is on the antero-lateral-superior left side of the stomach, where the wall does not stain with contrast, and air is visible in the wall.