

## Retrogastric cyst due to perforated appendix

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### ABSTRACT

Appendicitis is the most common abdominal emergency. The lifetime risk of having appendicitis is 8.6% for males and 6.7% for females; while the lifetime risk of appendicectomy is 12.0% for males and 23.1% for females. A very important complication of this entity is appendicular perforation. We treated a patient of appendicular perforation with extremely uncommon manifestation- retrogastric cyst leading to gastric outlet obstruction.

**Key words:** Appendicitis; appendicular perforation; complication of appendicitis

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### INTRODUCTION

Appendicitis is the most common abdominal emergency. The lifetime risk of developing appendicitis is approximately 7% and usually requires surgical treatment [1]. It can usually be diagnosed on the basis of thorough history and physical examination, along with evaluation of white blood cell count (WBC) [2]. However, it is a relatively rare cause of chronic or recurrent abdominal pain in children. Delay in diagnosing appendicitis may lead to appendicular perforation. If the temperature exceeds above 38°C, perforation may be suspected [1]. In case of a developed omentum, it may be able to limit the inflammation to the local side. Peritonitis usually develops if there is free perforation into the abdominal cavity. We treated a patient of appendicular perforation with extremely uncommon manifestation- retrogastric cyst leading to gastric outlet obstruction.

### CASE REPORT

A 4-year-old girl presented to us with complaint of upper abdominal pain and non-bilious vomiting for 10 days. There was history of low grade fever for 15 days. She had taken irregular treatment elsewhere, details of which were not available. On examination, there was fullness in epigastric region. There was mild generalized tenderness over the abdomen. Besides this, there was no other specific finding. She had been advised an upper gastrointestinal contrast study. It revealed a collection posterior to the stomach, which was compressing the stomach (figure 1). Ultrasound of the abdomen also revealed a collection in the epigastric collection. It was in relation to the stomach. A computerized tomography (CT)

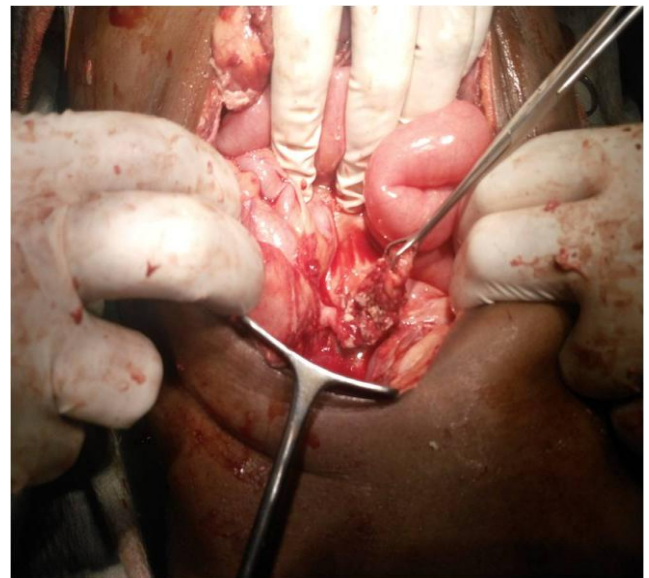
scan was advised; however, the attendants refused it due to cost constraints. A diagnosis of gastric outlet obstruction due to external cause was made.

Since there was a collection and the patient was symptomatic, we decided to proceed with laparotomy. After anesthetic fitness, the patient was operated under general anesthesia (GA). When the peritoneal cavity was opened, purulent fluid came out from behind the stomach. About 250 ml of fluid was drained. There were flakes in the peritoneal cavity suggesting bowel perforation. We carefully looked for stomach and small bowel; however, it was clear. The pancreas was normal. On exploring the ileocecal region, we noticed a blown out appendix (figure 2). The base of the appendix was secured carefully by absorbable suture. The wall of the cecum was not friable and primary closure was possible. After peritoneal lavage, abdomen was closed. Post-operative period was uneventful, and the patient was discharged in satisfactory condition on 10th post-operative day. The patient has been in follow up for last four months without any problem.

**Fig:1 Upper Gastrointestinal Contrast Study Showing Deformed Stomach Due To External Compression.**



**Fig: 2 Intraoperative Picture Showing Perforated Appendix.**



## **DISCUSSION**

The lifetime risk of having appendicitis is 8.6% for males and 6.7% for females; while the lifetime risk of appendectomy is 12.0% for males and 23.1% for females [3]. The clinical presentation is often varied and the diagnosis may be overshadowed by other medical conditions. Gastroenteritis is a very important misdiagnosis. Pain is the most common presenting symptom in children less than 5 years old, followed by vomiting, fever, anorexia and diarrhea. The important physical signs are focal tenderness, guarding, diffuse tenderness,

rebound tenderness, and mass [4]. Any cause of luminal obstruction of appendix will increase the intramural pressure. It leads to lymphatic, venous, and ultimately, arterial obstruction. Finally, due to ischemia, perforation may result [5].

Clinically, appendicitis can mimic virtually any abdominal cause of pain [5]. The systems involved may be hepatobiliary like cholecystitis, cholangitis, small bowel like intestinal obstruction, urinary tract like calculus or infection, and involvement of uterus or ovary. Besides many conditions like viral infections or auto immune conditions may simulate appendicitis [5]. Misdiagnosis may complicate appendicitis. It is a problem in the emergency department. A shorter stay in the emergency department, fewer laboratory tests, less diagnostic imaging, and fewer physical findings may be responsible for misdiagnosed appendicitis [6]. This increases the possibility of appendiceal perforation.

In the present case, the reason of presence of cystic collection in a hitherto undescribed space is not clear. Probably, due to the antibiotic treatment taken elsewhere, there was no typical presentation of appendicitis. It may also be the reason for localization of the collection. How it tracked up to manifest as a retrogastric collection can be a matter of speculation. CT scan may have detected appendicitis; however, since it was not done, we had to proceed with laparotomy without its aid. USG can easily diagnose appendicitis; however, its sensitivity is about 80% [7]. Hence, not every patient can be diagnosed to be having appendicitis on its basis. The non-bilious vomiting was probably due to inadequate treatment taken for appendicitis or due to the compression on stomach. The exact cause could not be ascertained as both appendix and collection were taken care of simultaneously.

### **CONCLUSION**

Appendicitis deserves attention because of its location. For any collection in peritoneal cavity at anywhere with doubtful history of fever and vomiting, ileo-cecal inspection is a must.

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