

Gastric Carcinoma in a 11-year-old Girl: a Case Report

*Ali MN,¹ Parvin R,² Islam MN,³ Hossain J,⁴ Mosawuir MA,⁵ Hassan MQ,⁶ Manik MH,⁷
Hossain MS⁸

Gastric adenocarcinoma is quite rare in children and as a result very little experience has been reported on with regards to clinical presentation, treatment and outcome. We describe the case of a 11-year-old girl presenting with abdominal pain and poor appetite for 2 months. Sonography showed massive ascites and computed tomography imaging revealed the presence of gastric mucosa thickness with omentum caking. The diagnosis of gastric adenocarcinoma was done by endoscopic biopsy & histopathology. Despite gastric adenocarcinoma being quite rare in the pediatric patient population, we should not overlook the possibility of gastric adenocarcinoma when a child presents with upper abdominal pain, vomiting and poor appetite.

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Introduction

Primary gastric adenocarcinoma is a rare cancer in children, and occurs in 0.05% of all childhood cancers.¹ The initial clinical presentations were mostly nonspecific abdominal symptoms, such as dyspepsia, epigastric pain, nausea/vomiting, weight loss, and gastrointestinal bleeding. The etiology of gastric adenocarcinoma in adults could be related to lifestyle factors or infective factors.² However, the role of these factors in children is unknown. The prognosis for the

gastric adenocarcinoma in children is very poor, with a median survival time of 5 months and average survival time of 7.5 months. Relatively little information exists regarding the 5-year disease free survival rate for children.³ Because of its rarity, the diagnosis and treatment in a pediatric population with gastric adenocarcinoma remains challenging. Here in we describe a 11-year-old girl with gastric adenocarcinoma who presented with upper abdominal pain, vomiting and poor appetite.

1. *Dr. Md. Naushad Ali, Assistant Professor of Gastroenterology, Rangpur Medical College. dr.naushadali74@gmail.com
2. Dr. Rehana Parvin, Junior Consultant of Radiology & Imaging, Sadar Hospital, Dinajpur
3. Prof. Dr. Md. Noor Islam, Head of the Department of Gastroenterology, Rangpur Medical College
4. Dr. Jimma Hossain, Assistant Professor of Gastroenterology, Rangpur Medical College
5. Dr. Md. Abdullahil Mosawuir, Associate Professor of Physiology, Rangpur Medical College, Rangpur
6. Dr. Md. Qamrul Hassan, Assistant Professor of Endocrinology, Rangpur Medical College
7. Dr. Mahfuzul Haque Manik, Registrar, Paediatric Surgery, Rangpur Medical College Hospital.
8. Dr. M S Hossain, Assistant Registrar of Gastroenterology, Rangpur Medical College Hospital

*For correspondence

Case Report

A 11-year-old girl presented with upper abdominal pain, vomiting for two months and poor appetite for one month. A body weight loss of 5 kilograms was noted initially. The diet habits of the patient were standard without any obvious personal favorites regarding food. No family history of gastric carcinoma is observed. The physical examination showed that patient was anaemic and cachectic. There was an ill defined epigastric mass about (75x43mm) in size on palpation. No enlarged lymph node was evident. Liver or spleen were no enlarged. Laboratory investigations revealed normal results except for moderately decreased haemoglobin (8.5 mg/dl) level.

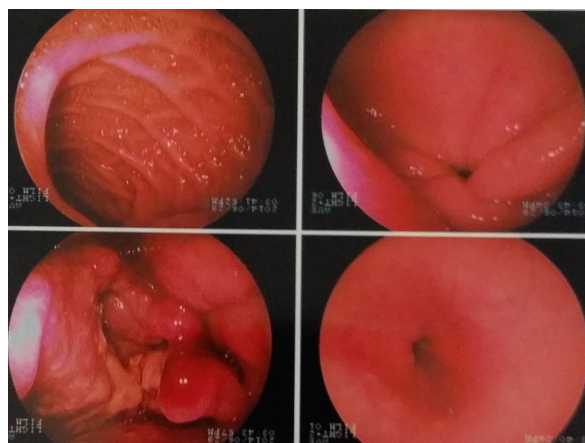


Figure 1. Gastrosopic finding

Abdominal sonography demonstrated ill defined heterogeneous mass about (76x43 mm) in size in epigastric region (antral growth). Abdominal computed tomography (CT) scan revealed large irregular mass in lower part of body and pylorus. Enlarged pre- and para-aortic lymph nodes were also found in CT scan. The gastroscopy revealed a large ulceroproiferative growth seen in the distal body and proximal antrum (fig 1). Five biopsy specimens were obtained from the margin of the lesions. Histopathological examination showed poorly differentiated

adeno- carcinoma. The patient had died within two months after the diagnosis.

Surgery was planned for management but could not done because party did not agreed.

Discussion

Gastric adenocarcinoma is primarily a disease that impacts older individuals, and is generally rare in individuals under the age of 30 years, and even rarer in the children.⁴ The presentation and biologic behavior of primary gastric adenocarcinoma in children are similar to those seen in adults. However, the etiology of pediatric gastric cancer is more unclear and may be associated with gene mutations,⁵ the incidence is very rare, the management is not well-established, and is associated with very poor clinical outcome as compared to adults. This is possibly because of its rarity and nonspecific presentation. It results in a failure to consider potential malignancy and thus contributes to a delay in diagnosis. The most common presentations in pediatric gastric adenocarcinoma are abdominal pain and vomiting, which may mimic other disease of acute abdomen.^{6,7} Other symptoms include, hematemesis, melena and weight loss. In general, pediatric physicians would not routinely do more invasive examination. Therefore, early gastric carcinoma is rare in children, and with nonspecific presentation. Most pediatric gastric adeno- carcinoma is diagnosed at terminal stage, which is quite different from adult. Our patient complained of abdominal pain and vomiting for one month. The upper gastrointestinal endoscopy was performed and biopsy was taken. Gastric adenocarcinoma was proved by histopathology. In this case, the importance of gastroscopy for prompt diagnosis in pediatric patients with epigastric pain and vomiting is emphasized.^{2,8,9} The most important risk factor of pediatric adenocarcinoma is *H. pylori* infection, which can cause chronic active inflammation in the gastric mucosa;

and furthermore, gastric atrophy can develop predominantly in the antrum.^{1,3,10} Pediatric patient gets *H. pylori* infection at a very early age. It is related to a much higher risk to develop gastric carcinoma especially in the setting of a positive family history of gastric carcinoma.¹¹ Other risk factors such as high intake of salt, smoked food, nitrates and carbohydrates, alcohol consumption, smoking, blood groups, and family history of carcinoma are associated with gastric adenocarcinoma in adults, but their role in children is unknown³. Taken together, no risk factor for development of gastric carcinoma was found in our patient. Because gastric adenocarcinoma rarely affects children, the management of this disease in children is not well-established, and must be based on the principles used in adults for the time being. Radical gastrectomy with extended lymph node dissection is the only curative management in patients with localized gastric adenocarcinoma; however, recurrence within 2 years is still quite common.^{1,3,12} Preoperative chemoradiation or post-operative adjuvant chemoradiation is commonly practiced and has been shown to improve survival¹³. In the patients with non-resectable tumors who had extensive metastatic disease, palliative chemotherapy, such as 5-fluorouracil, leucovorin, adriamycin, cisplatin, etoposide, and epirubicin-containing protocols can be effective when attempting to control the symptoms, and may provide some limited improvement in terms of survival rates.

Conclusion

Although gastric adenocarcinoma is rare in children, it should be suspected in a child with epigastric pain and vomiting. Upper gastrointestinal endoscopies with biopsies are crucial in children with vague abdominal symptoms.

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