

Case Report

A Boy with Dyspepsia and Ascites

GCF CHAN, GG LO, ANY CHEUNG

A 15-year-old boy with good past health complained of progressive abdominal distension, weight loss and poor appetite of one month duration. He had occasional dyspepsia for one year but had no medical consultation. He came from a fisherman family but no peculiar food intake pattern was identified. Barium meal and follow through showed coarsened gastric mucosal folds. CT scan of the abdomen and pelvis showed large amount of ascites with no abdominal or pelvic mass. Persistent gastric wall thickening was noted with no obvious intraluminal mass despite repeated CT scan after ingestion of gas-producing tablets (Figure 1).

What is the Diagnosis?

Paracentesis yielded plenty of malignant cells and immunophenotyping revealed that they were positive for cytokeratin and intracytoplasmic mucin. The ascitic fluid was negative for placental alkaline phosphatase. The findings were suggestive of metastatic adenocarcinoma. Gastroscopy showed that the gastric mucosa was

erythematous all over and was suspicious of linitis plastica. The stomach wall appeared to be rigid with no evidence of external compression. Biopsies showed clusters of malignant cells with signet-ring appearance (Figure 2) and were stained positive for mucin. Immunocytochemistry was positive for cytokeratin 7 and 20 and negative for placental alkaline phosphatase, β HCG and α FP. It was compatible with poorly differentiated adenocarcinoma. Serum CEA was elevated (17 ng/ml).

Gastric carcinoma, though uncommon in children,¹ should be considered as a possible etiology in children presenting with malignant ascites especially if the patient has gastric related symptoms. Even in the absence of an obvious abdominal mass, gastric carcinoma still cannot be ruled out for it can present as linitis plastica which only appears as thickened gastric wall on conventional imaging.

Department of Paediatrics, Queen Mary Hospital, The University of Hong Kong, 102 Pokfulam Road, Hong Kong, China

GCF CHAN (陳志峰) MD, FRCP(Edin)

Department of Radiology & Radiotherapy, Hong Kong Sanatorium & Hospital, Hong Kong, China

GG Lo (羅吳美英) MD, FHKCR

Department of Pathology, Queen Mary Hospital, The University of Hong Kong, 102 Pokfulam Road, Hong Kong, China

ANY CHEUNG (張雅賢) MD, FRCPath

Correspondence to: Dr GCF CHAN

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Figure 1 CT scan of the abdomen showed huge amount of ascites. Gastric wall appeared to be thickened (shown by the arrow) and gas pills added further enhanced this finding. No obvious mass was seen within the stomach.

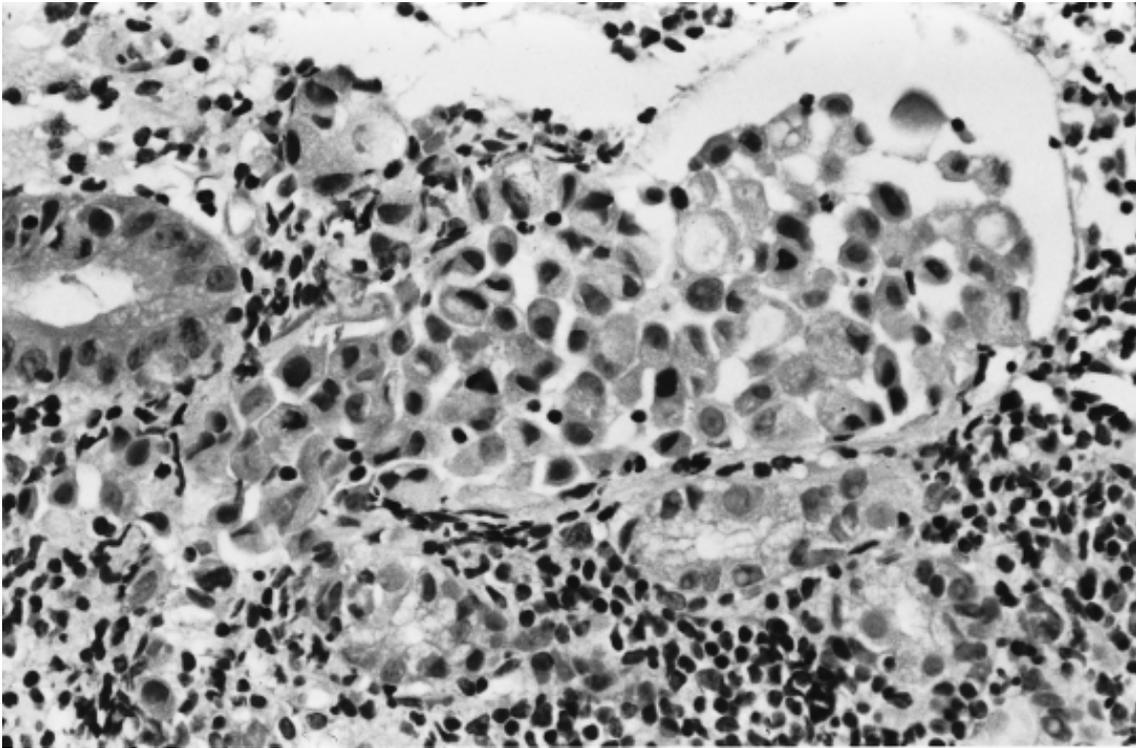


Figure 2 Section of the gastric mucosa from the body of the stomach showed chronic inflammatory changes with tiny clusters of carcinoma cell infiltration. The carcinoma cells have signet-ring appearance and stained positive for mucin.

In general, persistent thickening of gastric wall is seen only in gastric carcinoma and lymphoma. Gastritis rarely gives rise to thickening of stomach wall. Ascites is commonly associated with advanced gastric carcinoma.

In summary, in a child presenting with dyspepsia and ascites with no definite mass lesion, gastric carcinoma or lymphoma are the possible differential diagnoses. Thickened stomach wall by imaging will further support this impression.

Reference

1. Chan GCF, Ha SY, Lau YL, Chan KL, Tam PKH, Cheung A. Linitis plastica presenting as malignant ascites. *Med Pediatr Oncol* 2001;36:408-9.