



Isolated CA 19-9 elevation as preceding finding of colorectal carcinoma

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Abstract

Rectal bleeding, change in bowel habits, abdominal pain are cardinal symptoms of colorectal carcinoma. Otherwise, weight loss, fatigue and weakness do not suggest colorectal carcinoma. Carbohydrate antigen (CA) 19-9 level is higher in several malignancies, especially gastrointestinal malignancies, and some benign conditions. Herein, we present a patient who is referred to our clinic with the complaint of fatigue and significant CA 19-9 elevation, diagnosed as metastatic colorectal carcinoma. Presenting case highlights that CA 19-9 elevation might be the only finding of colorectal carcinoma in even patients with nonspecific complaints.

Keywords: Colorectal carcinoma, CA 19-9, liver metastasis

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Introduction

Carbohydrate antigen (CA) 19-9 level is higher in gastrointestinal system (GIS) malignancies, especially pancreatic carcinoma. It is one of the most widely used antigens for the preoperative assessment of extension and postoperative monitoring of recurrence at colorectal carcinoma (CRC). The elevation of CA 19-9 is an indicator of metastasis in CRC. We present herein a patient with liver metastasis and CA 19-9 elevation without any complaint of change in bowel habit, hematochezia or other gastrointestinal system related symptoms.

A 68-year-old man was admitted to the hospital with the complaints of fatigue and lack of appetite for one month. On physical examination the abdomen was normal, except moderate hepatomegaly. His laboratory findings were as follows: leukocyte $10910/\text{mm}^3$, hemoglobin 13.8 g/dl, hematocrite 43.3%, platelet $374.000/\text{mm}^3$, aspartate aminotransferase (AST) 40 U/L, alanine aminotransferase (ALT) 40 U/L, gamma glutamyl transferase (GGT) 200 U/L, alkaline phosphatase (ALP) 194 U/L, and total bilirubin 0.94 mg/dl. The patient referred to Gastroenterology outpatient clinic because of that CA 19-9 level was detected over 2000 U/mL. On the other hand, carcinoembryonic antigen (CEA) was 24.9 ng/mL. Abdominal ultrasonography detected three mass lesions consistent with metastasis in liver. Abdominal magnetic resonance imaging (MRI) demonstrated on T1-weighted images three hypointense lesions consistent with metastasis (Figure 1). To investigate the primary site of liver metastasis, the patient was carried out to gastrointestinal (GI) examination. Upper GI endoscopy revealed erythematous pangastritis. However, a mass lesion at sigmoid colon was found at colonoscopic examination (Figure 2).

CA 19-9 that is known as a sialylated Lewis blood group antigen has been used as a reliable biomarker for the management of several GIS malignancies, especially pancreatic carcinoma[1]. As a tumor biomarker CA 19-9 is not sufficiently sensitive or specific for pancreatic cancer and CRC [2,3]. Beside these GIS malignancies, CA 19-9 level is also elevated in patients with other malignancies such as esophageal, gastric, liver, breast, and lung cancers, as well as nonmalignant diseases such as obstructive jaundice, pancreatitis, cirrhosis, chronic lung diseases and ovarian teratoma [3-9]. Moreover, false negative results are detected in the Lewis antigen negative subjects who constitute 5-10% of whole population [3]. In this case, significant rise in CA 19-9 level conducted with mild elevations in CEA,

GGT and ALP levels is suggested that the disorder originated from biliary-pancreatic system, and so, dynamic MRI was chosen as the first evaluation modality. Surprising findings of MRI led to find out the primary site of metastatic liver lesions. Carcinoembryonic antigen and CA19-9 are tumor markers for the follow-up of colorectal cancer [2]. The serum levels of CA19-9 are related with advanced disease and raised serum levels of CA19-9 were considered as a sign of tumor progression [10]. Significant relationship between CA19-9 and nodal involvement was demonstrated. Relationship between CA 19-9 level and hematogenous metastasis is also evident. High serum level of CA19-9 is correlated with liver metastasis [11].



Figure 1. Metastatic liver lesions on T1 weighted magnetic resonance imaging.

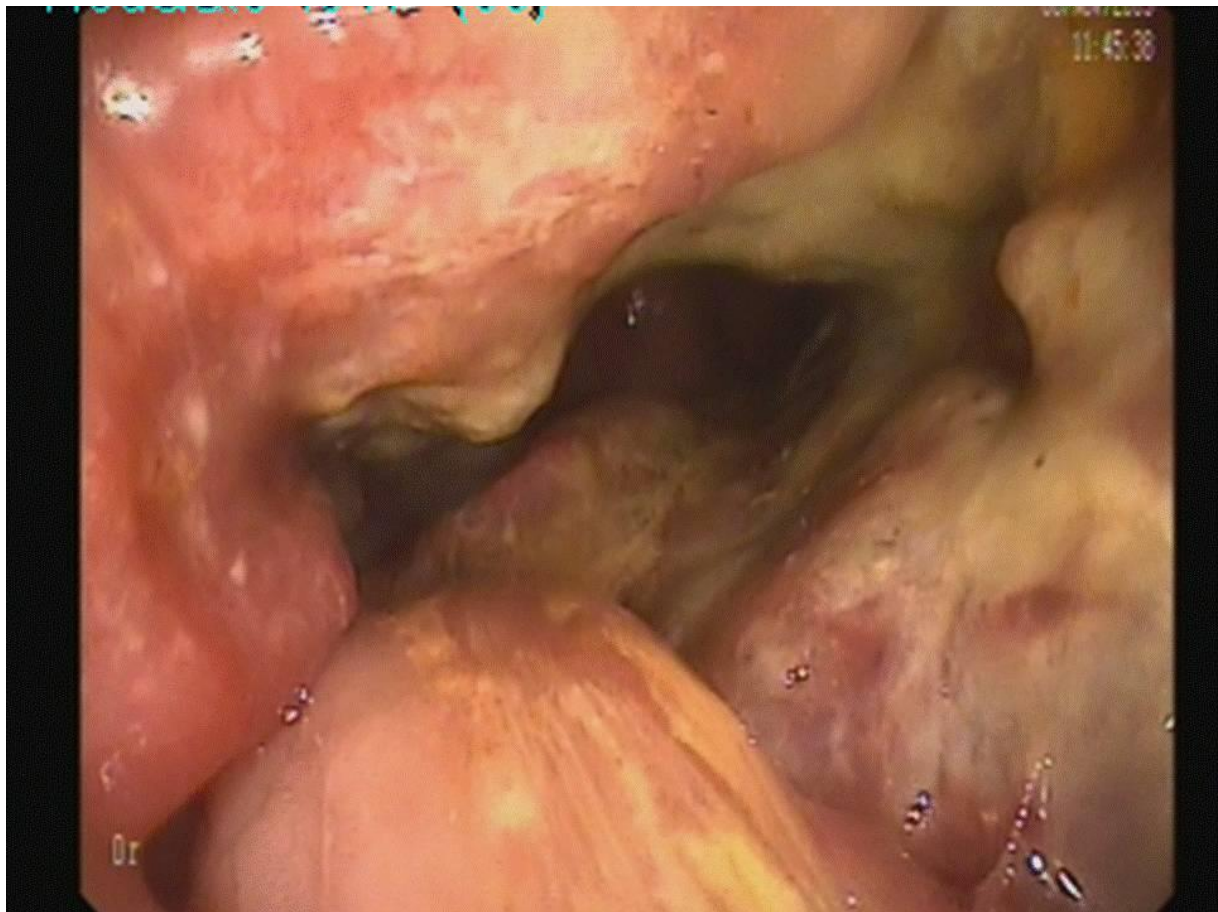


Figure 2. Mass lesion at sigmoid colon on colonoscopic examination.

Colorectal carcinoma presents with signs and symptoms that can be confused with benign conditions such as change in bowel habits, rectal bleeding, abdominal pain and blood in stool. On the other hand, weakness and fatigue or unintentional weight loss might be the first symptom of CRC as in this case. Clinicians should be aware of CRC in patients with CA 19-9 elevations whether or not the presence of classical GIS symptoms.

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