CASE PRESENTATION

A 55 year-old Caucasian male with history of high grade dysplastic polyps of the colon found 1 year prior and extensive smoking history presented with melena and significant drop in hemoglobin-hematocrit from a baseline of 10 g/dl-30.1% to 6 g/dl-18.1%. Patient underwent EGD found to have Billroth II anatomy and distally to the anastomosis site in the efferent limb of the small bowel (SB) friable nodules were noted (A). EGD 1 year prior did not reveal any nodules or masses. Biopsy specimens of the friable nodules showed cells strongly positive for Pankeratin & CK20, and negative for CK7 CD45, S100, CD117 (B)

Questions

1. What is the differential diagnosis of upper GI bleed?

2. What does a positive Pankeratin, CK20 & a negative CD45, S100, CD117 indicate?

3. How common is this entity?

Biopsy findings were consistent with metastatic adenocarcinoma of the small bowel. Patient was found to have skin nodules and CT findings of masses in the lung and colon; consistent with metastasis, likely a GI primary.

Answers

1. Ulcerative or Erosive disease, Portal Hypertensive disease (varices/gastropathy), Arteriovenous Malformations, Traumatic/Postsurgical, Tumors.

2. (-)CK7/(+)CK20, indicates primary mucinous tumors of the lower GI tract (80%). S100 is positive in 95% of melanomas, CD45 is positive in lymphoproliferative disease and CD117 is sensitive for GI stromal tumors.

3. See Discussion.

DISCUSSION

The incidence of metastatic tumors in the small intestine is relatively rare. The small bowel comprises more than 75% of the length of the entire gastrointestinal tract and represents about 90% of its mucosal surface area, however, small bowel tumors account for little more than 1% of all gastrointestinal malignancies. A Multicenter study of SB neoplasms found only 2 cases of metastatic SB adenocarcinoma and incidence of primary SB adenocarcinoma to be only 1/100,000 and both have shown to be associated with a poor prognosis, likely due to late presentation of disease.1-2

In a recent study of 491 patients from years 1970-2005 with small bowel adenocarcinoma, the most common principal symptom at diagnosis was abdominal pain (43%), followed by nausea and vomiting (16%), fatigue and anemia (15%), upper or lower gastrointestinal tract bleeding (7%), and jaundice (6%)2,3. Metastatic and primary tumors of the SB can also be found as a result of gastrointestinal bleed, intestinal obstruction, and intestinal perforation. The most common cause of GI bleed originating in the small bowel is either angiodysplasia or tumors. And particularly, adenocarcinomas of the small bowel are predominantly located in the duodenum.3

The variable nature of the presenting symptoms, combined with the lack of physical findings, can contribute to a delay in diagnosis in many cases. There is no single method that is best for imaging of the small intestine in a patient with a suspected small bowel (continued on page 46)
tumor. The choices are radiographic or endoscopic (capsule endoscopy, push enteroscopy, double-balloon endoscopy).

Depending on the clinical scenario, multiple tests may be needed to adequately evaluate the small intestine. Duodenal lesions may be apparent on barium studies. Conventional radiology, such as upper gastrointestinal series with barium contrast, has low sensitivity and only permits indirect examination of the small bowel. With new generation contrasted diagnostic yield has improved, with sensitivity in the range of 80-90%.\(^4\)

Until recently, endoscopic examination of the small intestine has been limited to the proximal small bowel unless intraoperative enteroscopy is used. In the last decade, visualization of and access to the small bowel improved with the introduction of capsule endoscopy and double balloon endoscopy.\(^1\)

Surgical resection remains the mainstay of treatment for small bowel adenocarcinoma, and the ability to completely resect the disease is one of the most important prognostic factors for survival. In a study examining the outcome of 217 patients with small bowel adenocarcinoma treated at MD Anderson, 146 patients underwent surgery as their primary definitive therapy. Surgical resection and lymph node ratio were the only independent predictors of overall survival in a multivariate analysis.\(^5\) At present, adjuvant chemotherapy data remain scarce and unconvincing. Most of the chemotherapy experience has been with 5-Flourouracil and is mainly used in the inoperable or metastatic setting and has shown some survival benefit.\(^5\)

It is probable that our case is a rare primary SB adenocarcinoma, however, other GI primary cannot be ruled out. Therefore, EGD evaluation is essential to look for rare etiologies.

References