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A Case of Signet Ring Cell Colon Carcinoma Initially Presenting As Acute Diverticulitis


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Learning Objectives

- Highlight guidelines and importance on colon cancer screening
- Educate on follow-up colonoscopy following diverticulitis treatment
- Enlighten clinicians on signet ring cell cancer

Introduction

- Signet ring cell cancer is a very rare and deadly type of colon malignancy
- Case profiles a unique circumstance where a patient with a final diagnosis of signet ring cell carcinoma originally presented with acute diverticulitis

Signet Ring Cell Histology

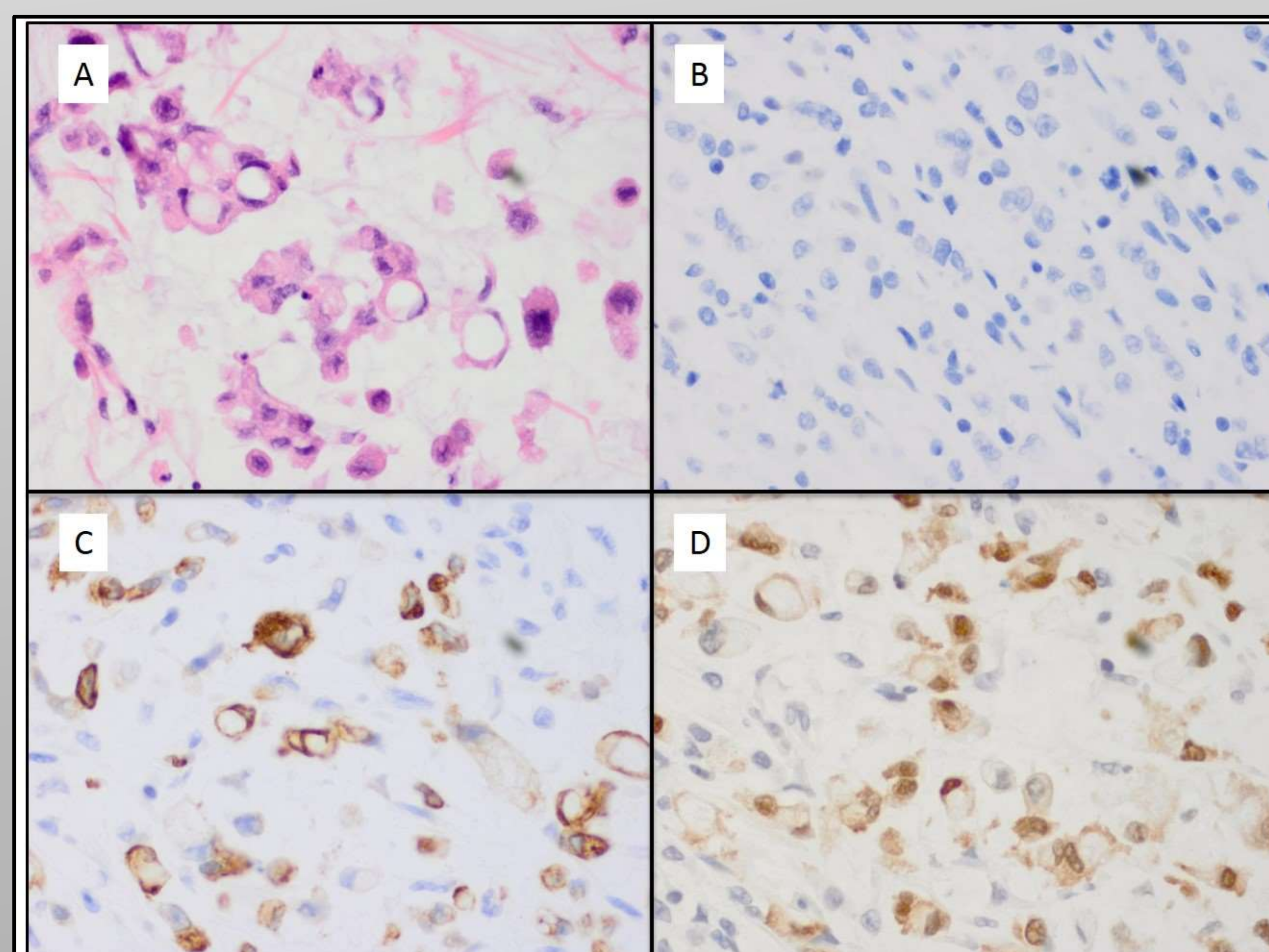


Figure 1. H&E sections (A, 40x) show numerous atypical signet cells that are negative for CK7 (B) and positive for CK20 (C) and CDX2 (D).

Patient Case

- HPI
 - 53 y.o. Caucasian female with sharp LLQ abdominal pain
- ROS
 - No fevers, diarrhea, rectal bleeding, emesis, melena
- PMH
 - Diabetes , Hypertension
- PSH
 - No prior colonoscopies or endoscopies
- Social Hx
 - No recent travel or sick contacts
- Family Hx
 - No gastroenterological disorders or cancers
- Labs
 - WBC- 12.6
- Imaging
 - CT scan A/P- moderate diverticulosis with mural thickening of the proximal sigmoid colon with adjacent edema and free pelvic fluid
 - 4.5 cm abscess inferior to the proximal sigmoid colon
- Hospital course
 - Placed on piperacillin/tazobactam for diverticulitis
 - Interventional Radiology for drainage of abscess
- Post Hospital Course
 - 6 week follow up colonoscopy showing obstructing mass lesion 20-25 cm from the anal verge
 - Sigmoidectomy with primary anastomosis
 - Pathology - high grade, poorly differentiated signet-ring cell carcinoma with metastatic carcinoma in 11 out of the 12 surrounding lymph nodes.

Discussion

- Signet Ring Cell Facts
 - Signet ring cell cancer present in <1% of all colon cancers ¹
 - First known incidence of signet ring cell carcinoma of the colon was reported in 1951 ²
 - Signet ring cell cancer is predominately located in the stomach (99%) when found in the GI tract ³
 - Named for physical appearance of dominant cell type
 - Cells must comprise >50% of total amount of tumor cells²
 - More likely to present at later stage than adenocarcinoma ⁴
 - More common in patients with IBD and history or radiation exposure ²
 - High frequency of BRAF mutations ²
 - Common presentation involves rectal bleeding, SBO, abdominal pain, hematochezia, abdominal mass, changes in bowel habits ²
- Colorectal Cancer Screening Guidelines Involving Colonoscopy in patient with no risk factors (ACG guidelines)
 - Begin at age 50 with repeat every 10 years
 - Begin at age 45 in African Americans
- Guidelines for colonoscopy following diverticulitis
 - Screening should take place 6 to 8 weeks following resolution of diverticulitis

Conclusion

- Signet ring cell cancer is a very rare form of colon malignancy
- Case highlights the importance of patients obtaining follow-up colonoscopy following a diagnosis of diverticulitis and the continued need for routine screening colonoscopies to detect and prevent the occurrence of colon cancer.

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