Atypical Presentation of Appendiceal Neuroendocrine Tumor, A Case Study

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Introduction

Gastrointestinal neuroendocrine tumors have an incidence of 2-5/100,000, of which appendiceal neuroendocrine tumors are the most common. Diagnosis is typically in the 2nd and 3rd decades of life. The most common presentation is that of acute appendicitis. A simple appendectomy is usually curative in patients with appendiceal neuroendocrine tumors < 1cm without lymphovascular invasion. A right hemicolectomy is indicated in tumors larger than 2 cm, located at the base, with mesoappendix, vascular, or perineural infiltration. The aim of this topic discussion is to inform and provide evidentiary support of a less common presentation of neuroendocrine neoplasia of the appendix.

Demographics

- 31-year-old female with past medical history of GERD and anemia
- No prior surgical history, no significant family history, healthcare worker
- Denies alcohol, tobacco, drug use

Presentation

- Presented to Emergency Department with two days of non-radiating right lower quadrant pain
- Associated symptoms: Nausea, bilious emesis, decreased bowel function
- Vitals: 36.8C, HR 117, BP 134/100, R16, SpO2 99% RA
- Exam: Abdomen soft, non-distended, with right lower quadrant and supraumbilical tenderness

Laboratory Results

	9/29/2019 0410
Wbc Count	11.80
Rbc Count	4.95
HEMOGLOBIN	14.4
Hematocrit	42.8
MCV	86.5
MCH	29.1
MCHC	33.6
Platelet Count	222
Rdw	13.0
MPV	8.2

CHEMISTRY ROUTINE	9/29/2019 0410
Sodium	135
Potassium	4.0 *
Chloride	103
Co2	20.6 *
Anion Gap	11.4 *
Urea Nitrogen, Blood	16 *
CREATININE	0.76 *
Egfr Non-Afr. Amer...	>90 *
Egfr African American	>90
GLUCOSE	111 *
Phosphorus	
Calcium	9.6 *
Alk Phosphatase	73 *
ALT	17 *
AST	21 *
Total Bilirubin	
BILIRUBIN,TOTAL	0.8 *
Bilirubin,Direct	
Total Protein	7.8 *
Albumin	4.8 *

Imaging



Small bowel obstruction caused by an abnormality of the terminal ileum and cecum. Mass is suspected. There is also suggestion of adjacent right lower quadrant mesenteric lymphadenopathy.

Operative Intervention

Initial GI plan for colonoscopy to evaluate for possible IBD, however the patient was unable to tolerate bowel prep. Patient ultimately underwent diagnostic laparoscopy converted to open laparotomy, release of SBO, extended right hemicolectomy with primary anastomosis. The cecum appeared indurated and firm, and was densely adherent to the pelvic sidewall.

Surveillance

Final pathology was consistent with a well-differentiated neuroendocrine tumor of the appendix with negative margins, no perineural invasion, and 4 of 24 lymph nodes positive, consistent with a pT4N1M0 malignancy. Oncology recommended surveillance with imaging and tumor markers (chromogranin A, 5 HIAA) every 3-6 months.

Discussion

This case study highlights the importance of identifying potential neuroendocrine malignancy in an SBO presentation. Furthermore, it emphasizes recognizing the need for a more extensive operative intervention based on tumor size indicated in preoperative imaging once the suspicion for a neuroendocrine etiology has been raised. In conclusion, GI neuroendocrine neoplasia should be well within the differential when encountering a patient with obstruction secondary to a small bowel mass lesion.