Rare Case of Small Cell Carcinoma of the Rectum

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Introduction

- Small cell carcinoma most commonly originates in the lung
- Colorectal small cell carcinoma is very rare, comprising 0.2% of all colorectal cancers
- The incidence of small cell lung cancer (SCLC) was found to be 22-times that of extrapulmonary small cell cancer [2]
- Colorectal SCC is highly aggressive and carries a poor prognosis

Case Description

- Patient is a 42-year-old female with a history of GERD and tobacco abuse who presented for rectal pain, 2 episodes of rectal bleeding, and a 2-month history of worsening constipation. She also endorsed night sweats, fatigue, nausea, and poor appetite
- CT abdomen/pelvis showed a perirectal mass measuring 3.3x2.2 cm with adjacent mildly enlarged lymph nodes (Figure A). Colonoscopy then showed an eroded, nodular, and ulcerated mucosa in the distal rectum (Figure B)
- The mass was biopsied and pathology revealed small cell carcinoma (Figure C). Sigmoidoscopy with EUS and rectal biopsy confirmed poorly differentiated small cell carcinoma
- Immunohistochemistry revealed that the tumor cells were positive for CD56 (Figure D), chromogranin, AE1/AE3 and TTF1
- MRI showed T4N2 disease with possible involvement of the left levator muscle in addition to positive suspicious left inguinal lymph nodes
- Patient was started on cisplatin and etoposide therapy

Images

Figure A

CT scan demonstrating perirectal mass measuring 3.3x2.2 cm concerning for metastases with adjacent mildly enlarged lymph nodes.

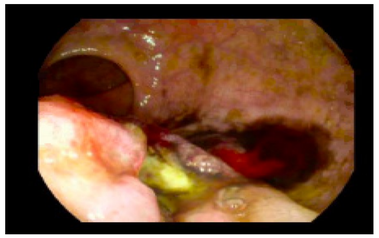

Figure B

Colonoscopy image showing an eroded, nodular and ulcerated mucosa in the distal rectum

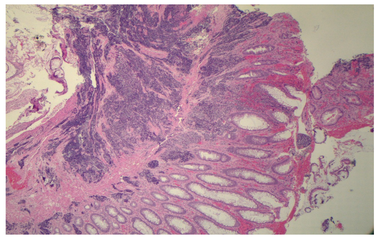

Figure C

H&E staining at 10x magnification demonstrating the rectal tumor adjacent to normal rectal tissue

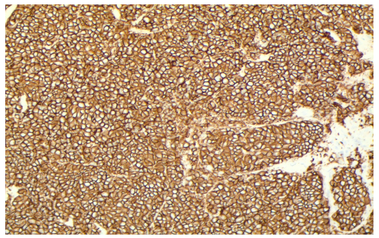

Figure D

Demonstrates Special staining demonstrating positive CD56 tumor cells.

Discussion

- Small cell carcinoma accounts for 0.1% to 1% of all GI malignancies, with the mean age at diagnosis of 60 years old [4]
- Symptoms of rectal small neuroendocrine cancers are similar to those of rectal adenocarcinomas including defecation difficulties, anal discomfort and blood per rectum [3]
- Most patients present with distant metastasis on presentation and have generalized symptoms of malignancy including fatigue, weight loss, and anorexia [1].
- The prognosis of colorectal SCC is generally poor. The rate of lymph node and liver metastases in colorectal SCC patients are 60%-89% and 20%-71%, respectively [5]. Median survival in previous studies was 11 months with palliative chemotherapy and 1 month with best supportive care (BSC) only [4]
- Based on their established role in metastatic SCLC, cisplatin and etoposide have been one of the most widely used regimens in gastroenteropancreatic NEC [4,9], improving median survival to around one year
- Curative surgery is usually attempted in localized disease, although retrospective series indicate that it is rarely curative as a sole therapeutic modality [10]
- Given the high relapse rate observed following radical surgery, platinum-based adjuvant therapy is recommended

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