Small cell carcinoma of the anal canal with associated high titer AGNA-1 antibody positive paraneoplastic syndrome

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Introduction

Small cell neuroendocrine carcinoma is a fast-growing, highly metastatic malignancy that most often originates in the lung. Very rarely, small cell neuroendocrine carcinoma arises from a primary colorectal site, accounting for less than 1% of colorectal cancers. Small cell neuroendocrine carcinoma is associated with paraneoplastic syndrome, which can cause a variety of systemic symptoms.

Patient Information

- 67-year-old male presented in **April 2024** with confusion, amnesia, and personality changes.

Initial Work Up

June – September 2024

- **June 2024: Positive high titer anti-glial nuclear antibody type 1 (AGNA-1) cerebrospinal fluid testing**
- Normal brain MRI, lumbar puncture, and PET/CT scan

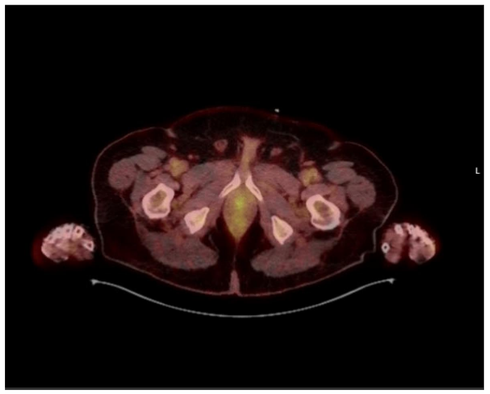


Figure 1: PET/CT scan August 2024 showing no abnormal uptake at the level of the anus

Clinical Course

December 2024

- Symptoms continued leading to repeat PET/CT which revealed uptake at the level of the anus
- **Biopsy revealed small cell carcinoma of the anal canal**
- Patient treated with Cisplatin/Etoposide and radiation therapy

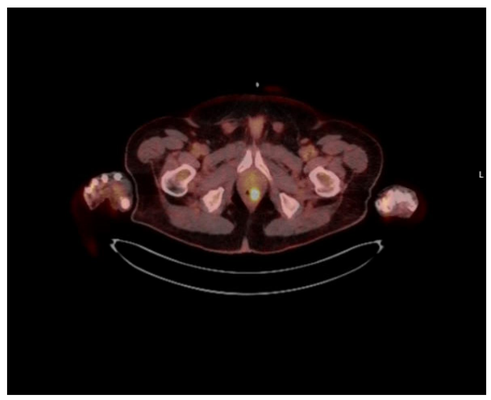


Figure 2: PET/CT scan December 2024 showing uptake at the level of the anus

May 2025 - Present

- Neurological symptoms improved
- Repeat biopsy showed no evidence of disease
- Serum AGNA-1 paraneoplastic antibody was negative
- MRI showed no abnormality
- **Overall, no evidence of disease**

Discussion

- Due to its extreme rarity, there is limited literature describing small cell carcinoma of the anal canal and its relationship to paraneoplastic syndrome
- A case has never been reported where paraneoplastic syndrome predated the diagnosis of small cell carcinoma of the anal canal
- Our patient's diagnosis of AGNA-1 antibody-positive paraneoplastic syndrome led to an early diagnosis of small-cell neuroendocrine carcinoma of the rectum prior to metastatic involvement

Conclusion

- Consider paraneoplastic antibody testing in patients with otherwise unexplained neurological symptoms
- Paraneoplastic syndrome can predate positive imaging findings in the diagnosis of small cell carcinoma of the anal canal
- Positive AGNA-1 test result should prompt persistent malignancy work up even with negative initial imaging
- Following standard treatment regimen for small cell carcinoma of the lung may lead to successful treatment of small cell carcinoma of the anal canal

Author Information and References: