



Case Report

**Serous Endometrial Intraepithelial Carcinoma with Metastasis to
the Optic Nerve**

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Received: 05 November 2024

Published: 18 November 2024

Abstract

We report on a 51-year-old lady, diagnosed with a serous endometrial intraepithelial carcinoma (SEIC), a rare and aggressive precursor to invasive serous endometrial carcinoma. The patient's clinical journey began with atypical uterine bleeding, leading to imaging studies that revealed a large, ill-defined leiomyoma. Diagnostic endometrial biopsies confirmed SEIC, prompting surgical intervention through total abdominal hysterectomy, bilateral salpingo-oophorectomy and omentectomy. Immunohistochemical analysis indicated a high-grade tumor profile, underscoring SEIC's aggressive nature. Postoperative treatment included chemotherapy and brachytherapy. Despite initial success, the patient experienced neurological symptoms due to CNS metastases, which was confirmed through imaging and biopsy. This case emphasizes the necessity for vigilant follow-up and tailored treatment strategies for patients with SEIC. (1-3)

Introduction

Endometrial intraepithelial carcinoma (SEIC) is an increasingly recognized precursor to invasive serous endometrial carcinoma, characterized by its aggressive behavior and potential for metastasis even in the absence of stromal invasion (4-6).

This case report discusses a 51-year-old lady diagnosed with serous endometrial intraepithelial carcinoma (SEIC) following a series of clinical evaluations and treatments. SEIC is recognized as a precursor to invasive serous endometrial carcinoma and is characterized by its aggressive nature and potential for metastasis, even in the absence of stromal invasion.

The patient presented with a history of atypical uterine bleeding that began approximately one year prior to diagnosis. Initial imaging via MRI revealed a large, transmural, ill-defined T2 heterogeneous leiomyoma measuring 50 x 40 mm located at the posterior aspect of the myometrial body and fundus, causing significant mass effect. The findings were classified as FIGO stage 2-5

Diagnostic Workup

Endometrial biopsies confirmed the presence of serous endometrial intraepithelial carcinoma. Additional

laboratory tests showed CA-125 levels at 17.7 U/ml and CEA levels at 3.5 ng/ml. Peritoneal cytology result was negative, indicating no evidence of malignant cells in the peritoneal fluid.

Surgical Intervention

The patient underwent a total abdominal hysterectomy (TAH), bilateral salpingo-oophorectomy (BSO), and omentectomy. Pathological examination revealed grade 3 endometrial adenocarcinoma involving half of the myometrial thickness.

Treatment

Post-surgical management included four courses of chemotherapy with Taxol (paclitaxel) and Carboplatin, followed by brachytherapy. Despite initial treatment success, the patient later presented with new neurological symptoms including otitis, blurred vision, and paralysis of cranial nerves.

Imaging Findings

Subsequent brain MRI was normal; however, orbital MRI indicated left-sided perioptic edema with mild prominence and a small enhancing focus measuring 10.7 mm located in the left sphenoid sinus adjacent to the left optic canal. Pathological biopsy of the left optic nerve revealed mucosal invasion by moderately differentiated adenocarcinoma.

Immunohistochemistry Results

Immunohistochemical analysis showed:

- Estrogen Receptor (ER): Positive
- Progesterone Receptor (PR): Positive
- p53: Positive
- p16: Positive
- PAX8: Positive
- CK20: Positive

These findings suggest a high-grade tumor with potential for further metastatic behavior, consistent with SEIC aggressive profile. (5)

Discussion

This case exemplifies the complex nature of serous endometrial intraepithelial carcinoma and its potential for aggressive behavior despite initial negative cytology and localized disease presentation. The patient subsequent neurological symptoms highlights the need for vigilant follow-up and consideration of possible metastatic spread even when initial imaging appears unremarkable.(7)

This case underscores the importance of comprehensive diagnostic evaluation and tailored treatment strategies for patients with SEIC. Given its aggressive nature, ongoing research into optimal management protocols is essential for improving patient outcomes (8-9)

References

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