

## Case Report

# A rare case of colonic metastasis of endometrial adenocarcinoma

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## ABSTRACT

Colorectal cancer is a leading cause of cancer-related morbidity and mortality, with primary adenocarcinoma of the colon accounting for the majority of cases. Less frequently, metastatic involvement of the colon from other primary malignancies may occur. The authors present the case of a 68-year-old female patient with past history of endometrial adenocarcinoma, who developed a colonic metastasis. The patient was previously treated for endometrioid adenocarcinoma with hysterectomy and bilateral anexectomy and now presented with elevated tumour markers during oncologic follow-up. Imaging revealed a suspicious thickening in the sigmoid colon and endoscopic biopsy confirmed moderately differentiated adenocarcinoma. A laparoscopic sigmoidectomy with liver biopsy was performed, revealing metastatic disease. Immunohistochemistry showed estrogenic and progesterone receptor positivity, as well as other markers suggestive of endometrial adenocarcinoma origin. This case highlights a rare instance of colonic metastasis from endometrial adenocarcinoma, a condition rarely observed in clinical practice. Understanding the histological and immunohistochemical characteristics of both cancers is critical for accurate diagnosis and treatment. This case underscores the importance of considering metastatic diseases when diagnosing colorectal lesions, especially in patients with past history of other malignancies.

**Keywords:** Colorectal cancer, Colonic metastasis, Endometrial adenocarcinoma

## INTRODUCTION

Colorectal cancer is a major cause of morbimortality related to cancer.<sup>1</sup> Primary adenocarcinoma of the colon represents the great majority of these tumours; less frequently are metastases from other primary tumours such as breast, prostate and lung cancer.<sup>2</sup> In this article we present the case of a colonic metastasis in a patient with past history of endometrial adenocarcinoma.

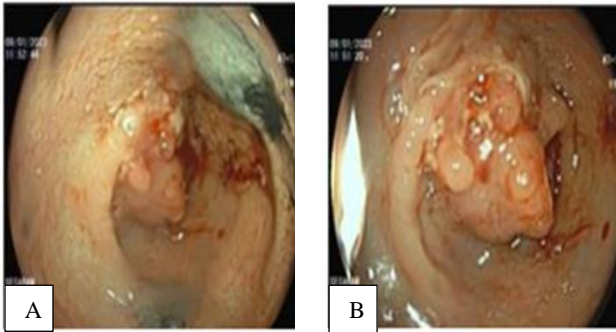
## CASE REPORT

The authors present a 68-year-old female patient with personal history of arterial hypertension and surgical

history of hysterectomy and bilateral anexectomy 8 years ago in the context of endometrioid adenocarcinoma, staged as pT1b LVI G1. Due to raised tumoral biomarkers (CA 125) during oncologic follow-up, the patient performed a CT scan to the thorax, abdomen and pelvis that revealed a single cavitated nodule measuring 23 mm in the middle lobe of the right lung and a wall thickening of the sigmoid colon.

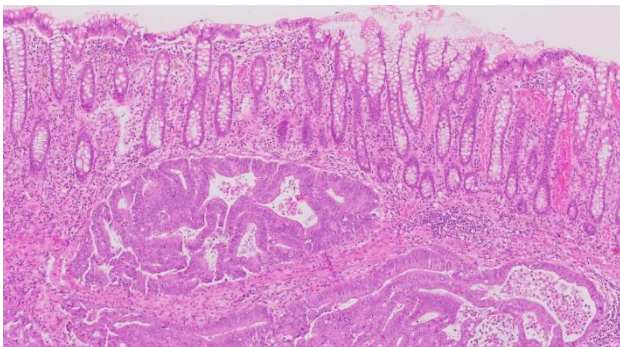
Clinically, the patient was asymptomatic, denying weight loss, changes in bowel habits or rectal bleeding. On physical examination, there were no palpable masses in the abdomen, and the gynecological exam was unremarkable. To investigate the sigmoid colon findings,

the patient underwent a colonoscopy, which confirmed a lesion in the sigmoid colon. Histopathological analysis revealed a moderately differentiated adenocarcinoma. A lung biopsy was considered but not performed due to the lesion's inaccessible location: a secondary lesion was deemed unlikely given the primary tumour's characteristics. The case was discussed by a multidisciplinary tumour board, which recommended primary surgery. The patient underwent a laparoscopic sigmoidectomy and a biopsy of a suspicious liver lesion identified intraoperatively.

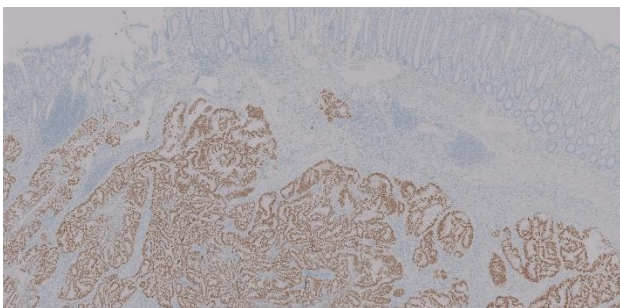


**Figure 1 (A and B): Sigmoid lesion in endoscopic exam.**

The postoperative period was uneventful, and the patient was discharged on postoperative day 5.



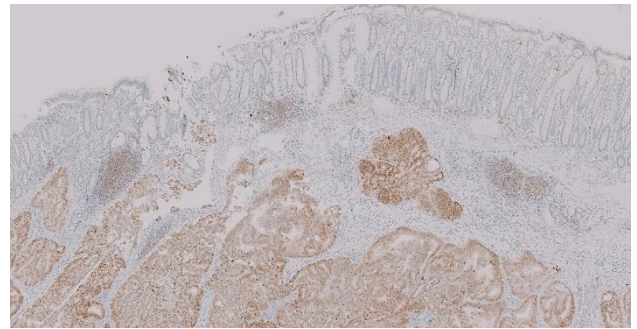
**Figure 2: HE.**



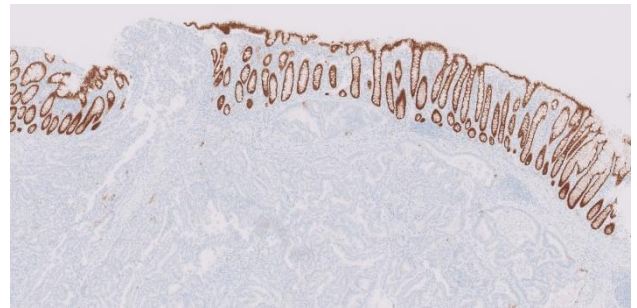
**Figure 3: Estrogen receptors.**

Histopathological evaluation revealed an adenocarcinoma. Immunohistochemical analysis showed the following profile: estrogen receptors (ER) positive (>

90% of the neoplastic cells), progesterone receptors (PR) positive (>90%), PAX8+, CK7+, CK20-, CDX2+ (rare cells), WT1-, GATA3-, TTF1- and wild-type p53 expression.



**Figure 4: PAX8.**



**Figure 5: CDX2.**

Based on these findings, metastatic endometrial adenocarcinoma was assumed, and the patient was referred for palliative chemotherapy.

## DISCUSSION

The authors present a rare case of colonic and liver metastases from endometrioid adenocarcinoma. Endometrial adenocarcinoma is the 4th most common neoplasm among women in Europe. The main risk factors include obesity, hypertension, diabetes mellitus, and prolonged exposure to estrogens. Mortality has been increasing by about 1.9% per year. Major risk factors for recurrence are histological grade 3, myometrial invasion > 50%, lymphovascular invasion, and age >60 years.<sup>3</sup>

Recurrence typically occurs in the pelvis (pelvic and para-aortic lymph nodes), vagina, and peritoneum, as well as in the lungs. Intra-abdominal organs are rare sites for metastases.<sup>4</sup>

In 2012, Anstadt et al reported a case of endometrial adenocarcinoma metastasizing to the colon, initially mistaken for a primary colorectal cancer.<sup>5</sup> Since then, there are less than 10 published cases of colonic metastases from endometrioid adenocarcinoma reinforcing the rarity of this presentation.<sup>5-9</sup> Most cases present many years after the original diagnosis,

mimicking primary colorectal malignancy, which also occurred in our case. However, they were frequently associated with colonic endometriosis, which was not present in our patient. Liver metastases, while more frequent than colonic lesions, are also uncommon and usually occur as part of metastatic disease. Cases that involve both colonic and hepatic metastases without peritoneal dissemination are extremely rare, with no substantial case series dedicated to this combined pattern reported to date. Histologically, colorectal and endometrial adenocarcinomas exhibit morphological similarities; however, their immunohistochemical profiles differ, particularly the expression of cytokines CK7 and CK20. The vast majority of colorectal adenocarcinomas are CK7- and CK20+; in contrast, endometrial adenocarcinomas are CK7+ and CK20-. For the latter, it is also important to evaluate the positivity for ER, PR, and CA125. PAX8 is also indicative of gynecological tumour.<sup>10</sup> In summary, our case contributes to the limited literature on colonic metastases from endometrial carcinoma and supports key points like rarity, diagnostic challenge with focus on the importance of immunohistochemistry profile for establishing the site of origin, and the importance of clinical suspicion for appropriate treatment.

## CONCLUSION

Although colon tumours are most frequently primarily malignant tumours, it is important to consider the possibility of other origins. This case thus represents an atypical and rare instance of recurrence of endometrioid adenocarcinoma presenting similarly to a primary colon neoplasm.

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