Squamous cell carcinoma of cervix origin with rare metastasis to the colon

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Abstract: We discuss the rare case of a 47-year-old female with a history of squamous cell carcinoma (SCC) *in situ* of the cervix, who presents with a bowel obstruction secondary to a sigmoid colon mass confirmed to be SCC of cervical origin. SCC is one of the rare malignancies of the gastrointestinal tract, and may occur as either a primary or secondary lesion. Metastasis from the cervix to the gastrointestinal tract is a rare occurrence, and has only been described in a handful of case reports. The treatment for colonic metastatic tumor arising from cervical SCC remains controversial. Surgery and debulking are the primary treatment modalities, while the role for radiotherapy and chemotherapy remain ambiguous. Further study is required to compare the efficacy of different treatment regimens.

Keywords: Colon cancer; cervical cancer; squamous cell carcinoma (SCC); metastasis; bowel obstruction

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Introduction

Cervical cancer is the third most common cancer in women, and accounts for a significant portion of cancer deaths worldwide (1). Histologically, squamous cell carcinoma (SCC) accounts for approximately 70% of all cervical cancers. Disease progression through metastasis or recurrence usually occurs within the first two years of treatment, and is associated with an overall poor prognosis (2,3). Distant metastasis occurs most commonly to the lungs or paraaortic nodes. Rare sites include the brain, skin, spleen, and muscle. Metastasis to the gastrointestinal tract is extremely uncommon (3-7).

In this report, we describe the case of colonic metastasis presenting as a large bowel obstruction. There is no consensus regarding the exact treatment of this condition. Surgery is the primary mode of therapy. Radiotherapy is indicated for ablation of unresectable masses, while the role of chemotherapy remains controversial. Ultimately, resection of metastatic lesions may help in palliative measures, and prevent recurrent intestinal obstructions (1,3).

Case presentation

A 47-year-old African American female presented to the Emergency Department (ED) with abdominal pain and bloody stool for two days. Past surgical history was significant for hysterectomy performed in 2014 for uterine leiomyoma. Pathology revealed high grade dysplasia with SCC *in situ*, and negative margins (*Figure 1*).

In the ED a CT scan was obtained which demonstrated dilated loops of bowel, with a transition point at the rectosigmoid junction secondary to a soft tissue density (*Figure 2*).

The patient was taken for laparotomy for non-resolving high grade colonic obstruction. Extensive lysis of adhesions was carried out, and a densely adherent mass was discovered in the pelvis. *En bloc* resection was performed of the rectosigmoid colon, bilateral ovaries, and portion of the bladder wall. The remainder of the patient's hospital course was uncomplicated, and she was discharged home.

Surgical pathology was significant for poorly differentiated SCC of cervical origin. There were demonstrated islands of poorly differentiated carcinoma with squamous features

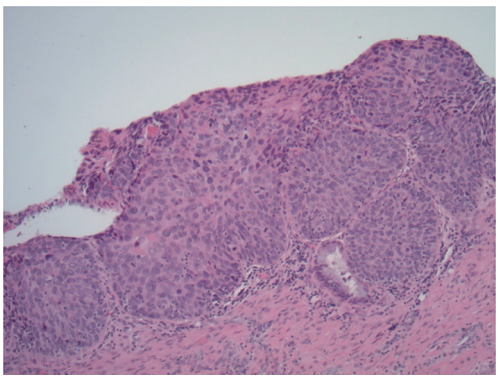

Figure 1 Pathology from a 2014 hysterectomy performed for uterine leiomyoma, demonstrating cervical squamous cell carcinoma (SCC) *in-situ* (hematoxylin and eosin staining, ×100).

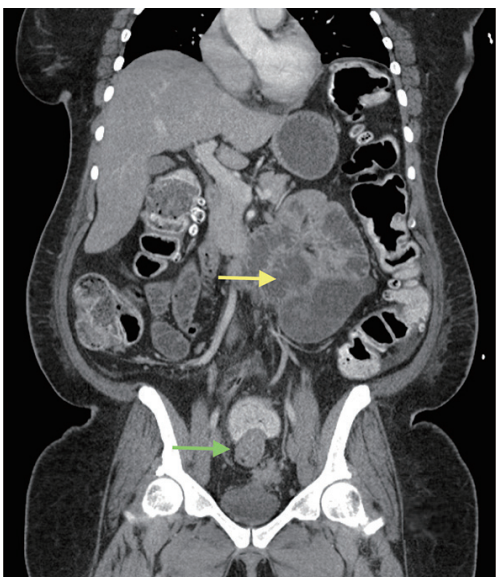

Figure 2 CT scan demonstrating mild dilatation throughout the colon, and dilatation of the small bowel (yellow arrow). Soft tissue nodular density (green arrow) at the rectosigmoid junction with apparent transition point.

infiltrating the desmoplastic stroma in the pericolonic fat, intestinal wall, bilateral ovaries, and fallopian tubes (*Figure 3*). Metastatic carcinoma was present in five of twelve lymph nodes.

Discussion

SCC of the colon is a rare entity. As a primary tumor its pathogenesis is unclear, and as a secondary tumor it

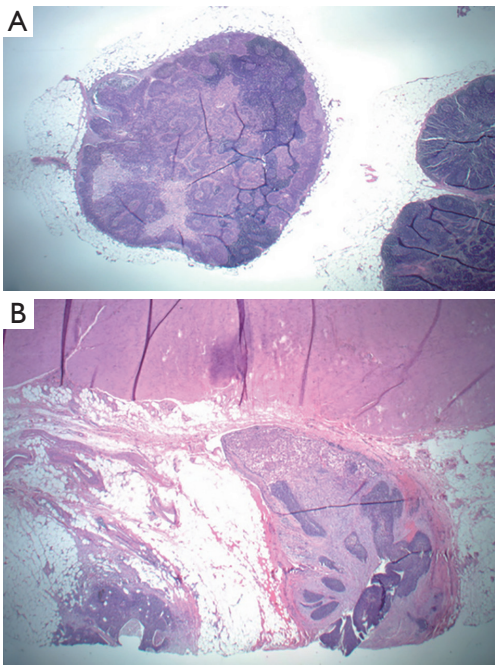

Figure 3 Pathology from 2018 *en bloc* resection of adherent colonic mass. Islands of poorly differentiated carcinoma with squamous features (A, hematoxylin and eosin staining, ×40) infiltrate the desmoplastic stroma in the pericolonic fat intestinal wall (B, hematoxylin and eosin staining, ×40). The colonic mucosa is focally eroded by the underlying tumor but is otherwise uninvolved.

arises from a metastatic disease process. Metastasis occurs through either transcoelomic, hematogenous, lymphatic, or transluminal passage (5,6). It is important to differentiate between these two entities, as metastatic SCC to the colon carries a significantly worse prognosis (5,6). In either case, early detection and prompt intervention significantly improve overall survival and disease free survival rates (6).

Colonic metastasis is often reported from primary sites such as the breast, kidney, ovary, and melanomas (6). It is rare that metastatic disease to the colon arises from the cervix. In advanced SCC of the cervix, distant metastasis occurs in 9–27% of patients. The most common sites include lung and para-aortic lymph nodes (3-7). Metastasis from the cervix to the colon is extremely rare, and has only been documented in a handful of cases (5-7).

Over the past several decades, survival rates of patients with cervical carcinoma have greatly improved. This has been attributed to improved screening, as well as advances in chemotherapy and radiotherapy. However, there has also been an increase in rates of recurrence and metastasis,

which are the main causes of death in these patients (7).

In general, sigmoid colon metastatic disease carries a poor prognosis due to its non-specific symptoms and late presentation (7). The treatment for colonic metastatic tumor arising from cervical SCC remains controversial, as not enough cases have been reported to compare treatment outcomes (5,7). Surgery and debulking are the primary treatment modalities, while the role for radiotherapy and chemotherapy remain somewhat ambiguous; they may be useful for unresectable masses or for palliative measures (1,3,5). Overall, further study is required to compare the efficacy of different treatment regimens.

Acknowledgements

None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Informed Consent: Written informed consent was obtained from the patient for publication of this Case Report and any accompanying images.

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