

Case Report

Recurrent cervical cancer isolated to the sigmoid colon: A case report[☆]Joyce N. Barlin, Josephine S. Kim, Richard R. Barakat^{*}

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ARTICLE INFO

Article history:

Received 11 June 2013

Accepted 16 July 2013

Available online 22 July 2013

Keywords:

Cervical cancer

Isolated recurrent cervical cancer

PET scan

Introduction

Early-stage cervical cancer can be potentially cured with radical hysterectomy or chemoradiation therapy. Unfortunately, based on data from retrospective studies, up to 17% of patients with this disease will recur (Larson et al., 1988; Esajas et al., 2001; Soisson et al., 1990; Ansink et al., 1996). Disease recurrence often presents within 2 years after primary treatment, and recurrences after radical hysterectomy commonly occur locally as central pelvic recurrences due to the extent of spread into contiguous tissues (Di Saia et al., 2012). The surgical management of a central recurrence in a previously irradiated field typically requires a pelvic exenteration. Exenterative procedures, however, are associated with significant operative and postoperative complications as well as long-term morbidity predominantly related to urinary tract diversion (Di Saia et al., 2012). In the less common case of an isolated recurrence, limited surgical excision with clear margins may offer curative therapy while avoiding the significant morbidity associated with exenteration. We report a case of isolated recurrent cervical cancer in the sigmoid colon arising 2 years after primary surgical therapy and treated by partial sigmoid resection with a primary anastomosis followed by chemoradiation therapy.

Case report

The patient is a 37-year-old woman who was initially seen at our institution in 2010 after colposcopic biopsies and endocervical curettage

at an outside hospital demonstrated poorly differentiated adenocarcinoma. On exam, she was noted to have an approximately 2 cm gross circumferential, exophytic cervical lesion without parametrial involvement. Fused positron emission tomography and computed tomography (PET/CT) scanning demonstrated no evidence of metastatic disease. She was counseled on management options for stage IBI cervical cancer, including primary chemoradiation versus primary radical surgery, and opted for upfront surgical management. In October 2010, she underwent robotic-assisted laparoscopic radical hysterectomy, sentinel lymph node mapping, bilateral pelvic lymphadenectomy and bilateral ovarian transposition. Sentinel node mapping and subsequent bilateral pelvic lymphadenectomy were performed per our institutional protocol. Final surgical pathology showed poorly differentiated endocervical adenosquamous carcinoma growing as an exophytic polypoid mass measuring 2.2 cm, invading the cervical stroma to a depth of 1 mm out of 12 mm; there was no vaginal or parametrial extension, and surgical margins were negative. There was no lymphovascular invasion, and all nine submitted lymph nodes were negative. The patient did well postoperatively and did not receive adjuvant treatment.

She was without evidence of disease on routine surveillance exams until she experienced hematochezia in July 2012, which spontaneously resolved. She had recurrent bloody stools in October 2012, prompting a colonoscopy at an outside facility. This study revealed a polypoid, partially obstructing circumferential large mass in the sigmoid colon, approximately 15 cm from the anal verge, concerning for a new primary colon carcinoma. Her final pathology, however, demonstrated carcinoma with squamous differentiation involving fragments of fibrous tissue and positive for p16, consistent with a likely recurrence of her cervical cancer. As illustrated in the graphical abstract, PET/CT scanning performed to assess the extent of disease spread showed a hypermetabolic isolated sigmoid colon lesion (SUV 26) without evidence of distant metastatic spread.

Given this isolated focus of recurrence, the decision was made to proceed with surgical resection of the mass following colonoscopic tattooing of the lesion with India ink to guide a laparoscopic approach (Fig. 1). In December 2012, she underwent robotic-assisted laparoscopic rectosigmoid resection with end-to-end colorectal anastomosis approximately 12 cm from the anal verge. A small Pfannenstiel incision was made in order to remove the excised specimen. Intraoperatively, there was no gross evidence of other sites of metastatic spread and no evidence of disease at the vaginal cuff; the peritoneal surfaces were noted to be smooth, and an upper abdominal survey was unremarkable. There were no intraoperative or postoperative complications, and the patient recovered uneventfully from this procedure. Final surgical pathology showed metastatic carcinoma with squamous differentiation, with the tumor measuring 4.5 cm and involving the full thickness of the colon wall from mucosa to serosa; surgical resection margins were negative.

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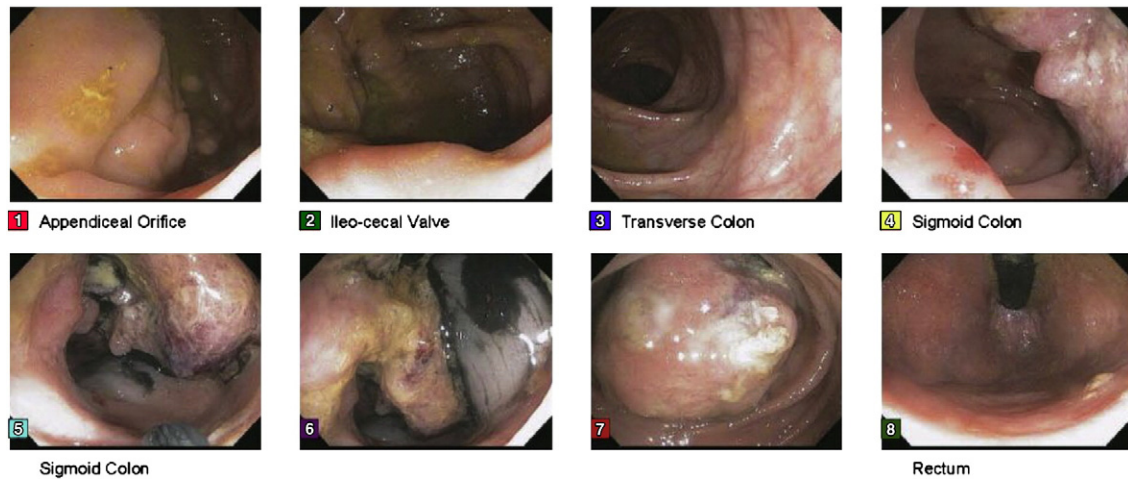


Fig. 1. Preoperative colonoscopy revealed a malignant partially obstructing tumor in the sigmoid colon. The lesion was tattooed with 5 mL of India ink.

Postoperatively, the patient was discussed at our treatment planning conference, and the decision was made to proceed with postoperative chemoradiation as the standard of care for pelvic failure after previous surgical therapy alone. She received chemoradiation with weekly radiosensitizing cisplatin for a total dose of 4500 cGy given in 25 fractions, which was completed March 2013. Surveillance CT imaging in May 2013 showed no evidence of disease.

Discussion

After primary surgery for cervical cancer, pelvic recurrence is generally managed with chemoradiation due to the presentation of a central pelvic vaginal cuff recurrent lesion, as seen in 35–40% of recurrences after radical hysterectomy (Peiretti et al., 2012). Surgical management of regionally recurrent cervical cancer in the setting of prior hysterectomy typically involves radical pelvic surgery in order to achieve surgical resection with curative intent. However, the utility of limited surgical resection for isolated disease recurrence should be considered in cases in which cure might be achieved without the need for radical exenterative surgery. We present an unusual case of pelvic recurrence isolated to a segment of the sigmoid colon treated by robotically assisted laparoscopic rectosigmoid resection, with achievement of negative surgical margins. There was a sufficient degree of redundancy noted in the descending colon and rectosigmoid to allow for a tension-free primary anastomosis in order to avoid ostomy creation.

Surgical resection in cervical cancer recurrence has been reported for other sites of isolated metastases, for example, with pulmonary lesions (Lim et al., 2010) and isolated splenic metastasis (Di Donato et al., 2010). In the setting of gastrointestinal tract recurrences, however, intraperitoneal seeding or tethering of bowel loops to mesenteric tumor implants often preclude focal resection due to diffuse spread and poor prognosis. While the rectum is frequently involved with centrally recurrent cervical cancer due to contiguous extension (Fulcher et al., 1999), isolated recurrent cervical cancer occurring within the colon or rectal lumen is rare. One case report describes a patient with early-stage cervical cancer treated by radical hysterectomy, who then recurred 15 years later with an initial complaint of rectal bleeding (Sweetser and Ahlquist, 2010). Colonoscopy demonstrated a mass lesion within the rectum mimicking rectal cancer. In this case, however, imaging demonstrated a contiguous pelvic mass between the sacrum and rectum. She received chemoradiation with near complete regression of the pelvic mass followed by surgical resection of residual disease with intraoperative radiation therapy. No follow-up information is provided.

We acknowledge that only nine pelvic lymph nodes were removed at the time of the patient's primary surgery, which may suggest that

her recurrence risk was increased by an incomplete nodal assessment. However, given that her PET/CT imaging prior to her rectosigmoid resection demonstrated no abnormal uptake in the abdominopelvic nodes, we believe the initial nodal assessment was adequate. As such and per the surgeon's discretion, we felt that a minimally invasive procedure without additional lymph node sampling at the time of her recurrence was a favorable option in order to minimize her intraoperative and postoperative morbidity. Additionally, the patient underwent sentinel node mapping at the time of her initial surgery. Although sentinel node mapping in the setting of cervical cancer is still considered investigational, it has gained increasing support in the literature, demonstrating a potential role for sparing complete nodal dissection while still accurately identifying nodal metastases (Cibula et al., 2012; Cormier et al., 2011; Selman et al., 2008).

Concurrent cisplatin-based chemotherapy and radiation were also administered to our patient postoperatively as the treatment of choice for recurrent centrally located cervical cancer following primary surgery alone (Leitao and Chi, 2002; Gadducci et al., 2010). Because isolated cervical cancer recurrence to the rectosigmoid colon is rare, prospective data regarding the addition of chemoradiation in this particular setting are lacking. However, in locally recurrent disease, radiation offers long-term pelvic control and prolonged survival (Cervical Cancer, 1996). In this case report, there was no gross residual disease following anterior rectosigmoid resection, but chemoradiation was clinically indicated given the high risk of residual microscopic tumor.

Similarly, outcome data to guide the decision to treat by surgery alone versus combined surgery with chemoradiation for confined recurrent disease after surgery alone are sparse. One recent retrospective study examining outcomes of patients undergoing salvage therapy for recurrent cervical cancer following radical hysterectomy found that patients undergoing surgery plus chemotherapy or concurrent chemoradiation had worse survival rates after recurrence compared with those undergoing surgery alone (Cervical Cancer, 1996). However, the authors speculated that receiving chemotherapy or chemoradiation was a surrogate for more extensive disease, in which providers believed surgery alone was not sufficient treatment. Therefore, it remains that the approach to recurrent cervical cancer should be individualized based on the presentation of the recurrence and the patient's performance status. Innovative strategies such as the approach presented in this case should be considered when possible to minimize morbidity and potentially improve survival.

Conflict of interest statement

There are no conflicts of interest to disclose.

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