Metastasis of the Proximal Jejunum from Cervical Carcinoma: A Case Report and Literature Review

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Abstract

Metastatic neoplasm of the small intestine is uncommonly encountered. We herein reported a case of 66-year-old female patient with a history of cervical carcinoma presented as a spell of digestive symptoms. Imaging examination revealed disseminated disease involving her proximal jejunum. Endoscopic biopsy was performed showing metastatic squamous cell carcinoma with the same characteristics of cervical lesion. Although the clinical presentation of enteral metastases is extremely rare, awareness of such metastatic pattern of cervical cancer is necessary for diagnostic practices and therapeutic decisions.

Introduction

Malignant tumors of the small bowel are uncommon tumor accounting for only 1-5% of all gastrointestinal tract malignancies [1]. Histologically, adenocarcinoma is most frequently involved, followed by mesenchymoma, lymphoma, leiomyosarcoma, and metastatic carcinoma constituting the minority. Generally, gastrointestinal metastases are rare and asymptomatic, occurring in advanced tumor stages, and usually accompanied by poor prognosis. Most of the metastatic intestinal tumor originates from lung, melanoma, choriocarcinoma and breast, but with very few cases of cervical carcinoma involvement.

Herein, we share a rare case of metastasis of the proximal jejunum from cervical carcinoma presenting as postprandial nausea and vomiting. The diagnostic procession is depicted and a brief review of such metastatic diseases is provided.

Case Presentation

A 66-year-old female were hospitalized with severe gastrointestinal symptoms. Patient had complaints of appetite loss, postprandial nausea, intermittant vomiting and abdominal bloating. She was diagnosed with stage IIb squamous cell carcinoma of cervix three years ago and received concurrent chemotherapy and radiation treatment. She had undergone local radiotherapy 1 month previously for pelvic lymph node metastasis. An abdominal CT revealed the presence of prominent mural thickening with proximally luminal dilatation involving duodenojejunal junction (Figure 1). The subsequent upper endoscopy identified a protuberant lesion with luminal narrowing located at proximal jejunum about 5 cm distal to the Treitz ligament. The mucous membranes appeared to uneven, redness and erosion (Figure 2a). Biopsies were performed and pathological examination showed solid nests of poorly-differentiated cancer cell in mucosa and submucosa emerging from chronically inflamed intestinal mucosa (Figure 2b). Additional immunohistochemistry supported the diagnosis of squamous cell carcinoma based on the results of histochemical staining: P63 (+), CK5/6 (+), P40 (+), CK7 (-), and CK20 (-) (Figure 2c, d). In view of these data, the lesion was considered to be cervical carcinoma and underwent self-expanding metal stent insertion via endoscopy. On postoperative examination, intestinal obstruction was relieved (Figure 3). 5 days after decompression and supportive management, the patient was asymptomatic for the metastasis and discharged. At present, she is on a regular follow-up.

Discussion

Cervical neoplasia is one of the commonest gynecologic malignancy seen in China accounting for approximately 29000 deaths per year [2]. About 60-80% of cervical neoplasia is squamous cell carcinoma, 5-15% is adenocarcinoma and less 10% consists of adenosquamous carcinoma [3]. In essence, squamous cell carcinoma of cervix tends to spread locally, commonly restricted to pelvic structure. Lymphatic spread principally accounts for the metastatic lesions beyond the pelvis and has the capacity to skip to distant nodes generating isolated lesions anywhere in the body. The most frequent sites of metastatic lesions include lung (21%), bone (16%) liver (4%) and gastrointestinal tract (4%) [4, 5]. Intestinal metastases from cervical tumor are mostly at rectosigmoid portion because of local extension, while...
upper intestinal metastasis is exceedingly uncommon. It remains puzzling why small bowel metastases are such rare events. The potential antitumor mechanism involves abundant mucosal immune protection, and strong self-renewal capability [6, 7].

Our search of the literature found 12 articles reporting on cervical carcinoma patient with biopsy-proven metastasis in small intestine so far. There are 6 cases of duodenal metastases [8-13], 2 cases of jejunal metastases [14, 15], and 4 cases of ileum involvement [16-19]. A comprehensive summary of such cases is provided in Table 1. The majority of these patients are found to have intestinal metastasis within the first 2 years after diagnosis of the primary cervix tumor. The metastases can cause bowel obstruction, bleeding and epigastric pain. On endoscopy, tumor lesions are presented as polypoid mass, nodules or submucosal mass with ulceration. Cancer patients with small bowel involvement usually have a poor prognosis due to delayed diagnosis and high malignant degree. Given the rarity of the condition, there remains therapeutic uncertainty and limited data to guide treatment decisions. In this context, treatments could be chosen based on performance status of the patients. As in our case, palliative self-expanding metal stent implantation is the best way to relieve symptoms and improve survival quality. Metal stent insertion has been reported as a promising palliative treatment for patients with advanced malignancies causing gastrointestinal obstruction. The feasibility, efficacy and safety of this technique have been evaluated in few studies [20, 21]. Bessoud et al. reported on 72 patients with...
malignant small bowel obstructions who underwent metal stent insertion. The technical success rate was 97% while the complication rate was 17%. The most common complications include stent migration, stent fracture, and intestinal perforation [22]. Similarly, Kim et al evaluated the complications of metal stent insertion in 213 patients with malignant gastroduodenal obstruction. A total of 45 (21%, 45/213) complications occurred in the first year after stent placement. Tumor overgrowth, stent collapse, and stent migration were the main complications affected the prognosis [23]. In our case, there is no short-term complication and the patient will be followed up.

**Conclusion**

In conclusion, despite its rarity, the possibility of metastasis to jejunum or other gastrointestinal tract involvement should be kept in mind. Besides, nausea, vomiting and appetite loss are common symptoms of cancer patients in advanced stage especially during the course of chemo radiotherapy. Failure to consider intestinal metastasis may result in a delay in diagnosis. Physicians should be aware of the varied metastatic lesions and perform endoscopic examination of necessary.

**Competing Interests**

The author(s) declare that they have no competing interests.

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| Authors                  | Age | Stage of cervical lesion | Time interval to metastases | Metastatic sites       | Presenting symptoms                        | Treatment                        |
|--------------------------|-----|--------------------------|------------------------------|------------------------|---------------------------------------------|----------------------------------|
| Subramanian[8]           | 50  | IIa                      | 2 years                      | duodenum               | Epigastric pain and loss of appetite        | Chemotherapy                     |
| Chawhan[9]               | 52  | NR                       | 2 years                      | duodenum               | Loss of weight                             | NR                               |
| Raphael[10]             | 57  | NR                       | 1 month                      | duodenum               | Epigastric pain and vomiting                | Supportive care                     |
| Kanthan[11]             | 49  | IIa                      | 2 years                      | duodenum               | Gastrointestinal bleeding                   | NR                               |
| Lee[12]                  | 50  | IIa                      | 2 years                      | duodenum               | Epigastric pain                            | Chemotherapy                     |
| Gurian[13]              | 61  | IIIb                     | synchronous                 | duodenum               | Occult bleeding                            | Refused surgery                  |
| Misonour[14]            | 69  | Ia                       | 13 years                    | jejunum                | Perforation with panperitonitis             | Laparotomy                      |
| Onal[15]                | 63  | NR                       | 8 months                    | jejunum                | Fatigue, loss of appetite, and nausea       | Surgery                          |
| Mathur[16]              | 35  | NR                       | synchronous                 | ileum                  | Abdominal pain, vomiting and constipation   | Surgery                          |
| Qiu[17]                 | 46  | IIb                      | synchronous                 | ileum                  | Acute abdomen                              | Surgery                          |
| Sugimoto[18]            | 84  | III                      | 3 months                    | ileum                  | Epigastric pain                            | Surgery                          |
| Yu[19]                  | 45  | Ib                       | 3 years                     | ileum                  | Abdominal distension and dull pain         | Surgery                          |

Table 1: The intestinal metastases from carcinoma of cervix reported in the literature.

NR—not reported

Citation: Li L, Yang G, Zheng J, Kang C, Wang J, et al. (2017) Metastasis of the Proximal Jejunum from Cervical Carcinoma: A Case Report and Literature Review. Int J Gastroenterol Disord Ther 4: 125. doi: http://dx.doi.org/10.15344/2393-8498/2017/125
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