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Case Report

Synchronous Adenocarcinomas of Jejunum: A Case Report

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Abstract Small bowel adenocarcinoma is a rare cancer. The standard treatment is surgical resection with free surgical margins. We report a case of synchronous, multiple adenocarcinoma of jejunum, in which curative resection was performed and adjuvant chemotherapy after surgery was given. The patient was a 49-year-old man who presented with abdominal pain for one month. Abdominal computer tomography (CT) revealed a segment of irregularly-shaped proximal jejunum with mucosal thickening, suggestive of small bowel carcinoma. The patient underwent proximal jejunal resection with negative resection margins. Pathological examination showed poorly differentiated adenocarcinoma at two separate locations, with invasion to the serosa as well as angiolymphatic invasion. There was no regional lymph node metastasis. The patient was received adjuvant treatment with Fluoropyrimidine based chemotherapy. After a follow up of 8 months, there was no evidence of tumor recurrence or metastasis. Synchronous small bowel carcinoma is a rare condition. Curative treatment is primarily a segmental resection with negative margins, with adjuvant chemotherapy for improved outcome. The diagnosis requires a high index of suspicion.

Keywords: Adenocarcinoma, Jejunum, Synchronous

Introduction

Small bowel adenocarcinoma is a rare cancer, accounting for less than 5% of all gastrointestinal cancers.[1-3] The most common histologic subtype of small bowel malignancy is adenocarcinoma, seen in approximately 40% of all small bowel malignancy.[2,4,5] There seems to be a higher incidence in North America and Western Europe and lower incidence in Asia.[1] The clinical presentation of this cancer is not specific enough for early diagnosis. The standard treatment is surgical resection with free margins. The role of adjuvant chemotherapy is controversial.[6] The 5 year survival rate is approximately 30%.[3] Most cases have a single lesion in the small bowel.[7] There are reports of small bowel adenocarcinoma coexisting with tumors at another location, such as colorectal cancer.[7-9] In this paper, we report a case of synchronous adenocarcinoma of jejunum, for which a curative resection was done and adjuvant chemotherapy after surgery was given.

Case report

A 49-year-old man presented with abdominal pain for one month. There were no other gastrointestinal symptoms, compressive symptoms or urinary symptoms. Esophagogastroduodenoscopy (EGD) and colonoscopy was performed, which showed normal findings. The patient underwent axial helical computerized tomography (CT) of the whole abdomen at 3 mm. slice thickness.

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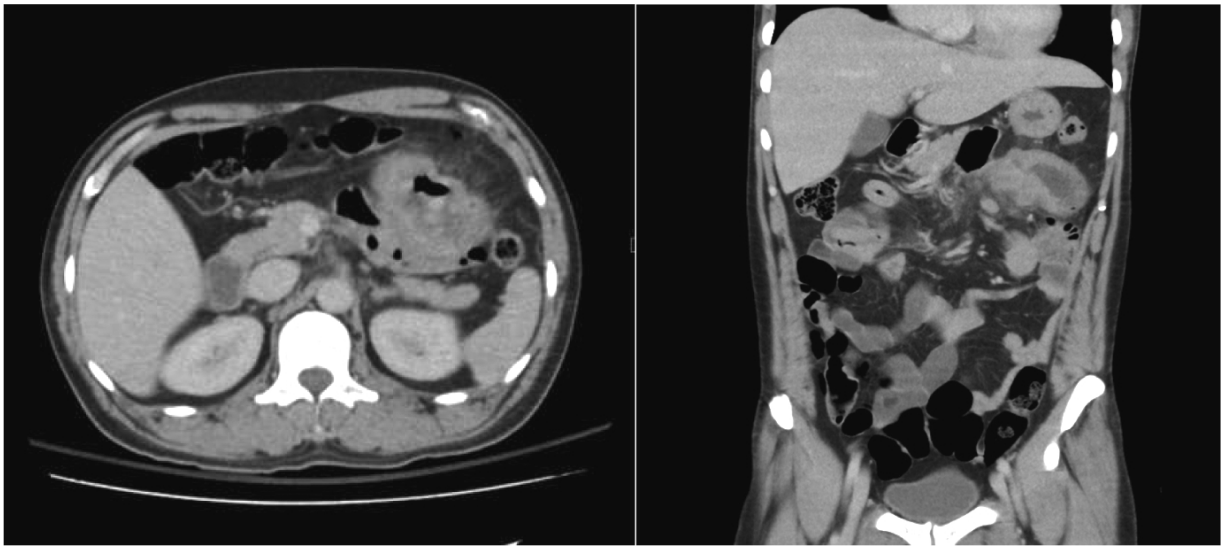

Figure 1 Computerized tomography showing an irregular segment of proximal jejunum with mucosal thickening, suggestive of small bowel carcinoma.

This revealed a long irregularly-shaped segment at the proximal jejunum, with mucosal thickening, which suggested small bowel carcinoma (Figure 1). The patient underwent proximal jejunal resection and jejunojejunostomy. The gross specimen showed two ulcerating circumferential masses, of sizes 7x5 cm. and 7x4 cm. (Figure 2). Both masses involved the serosa. The margins were free from cancer. Histological examination showed malignant cells clusters originating from the mucosa, in poorly formed glands and sheets structures with invasion into the serosa. There was angiolymphatic invasion. Regional lymph nodes showed reactive hyperplasia. The final pathological diagnosis was two foci of poorly differentiated adenocarcinoma with invasion into the serosa, with free surgical resection margins. According to Union Against Cancer/American Joint Committee on Cancer (UICC/AJCC) staging system, 8th edition, the patient hade pathological stage T3N0M0 adenocarcinoma of the small bowel. This patient recovered satisfactorily after surgery without complications. The patient also received adjuvant Fluoropyrimidine-based chemotherapy regimen. The follow up time was eight months without any tumor recurrence or metastasis.

Figure 2 Two lesions of adenocarcinoma at the proximal jejunum

Discussion

Small bowel adenocarcinoma is a rare gastrointestinal cancer, especially with multiple lesions. In the present report, patient had synchronous adenocarcinoma (with two separate lesions) at the proximal jejunum without coexisting tumors at other locations, such as the colorectal region. This differed from previous reports in which small bowel adenocarcinoma was present with tumors at another location, such as colorectal cancer.[7-9]

Chronic inflammation is one possible factor for increased risk of small bowel adenocarcinoma. Other possible factors include Crohn's disease, Peutz-Jeghers syndrome, familial adenomatous polyposis (FAP), and hereditary non-polyposis colorectal cancer (HNPCC).[10-13]

Most cases of small bowel adenocarcinoma are

diagnosed at an advanced stage and curative resection could be performed in only 50% of cases at diagnosis.[5,14] The diagnosis requires a high index of suspicion. Clinical presentation includes abdominal pain, abdominal mass, gastrointestinal bleeding or anemia. Due to the rarity of this disease, especially with multiple lesions, there are only few published reports.[7,15-17] Most cases presented with vague clinical presentations during old age.[2,4]

The primary treatment of early-stage small bowel adenocarcinoma is surgical resection with free resection margins together with *en bloc* resection of the regional lymph nodes.[18,19] The adequate number of lymph nodes to be removed is controversial. Wilhelm et. al[20] showed that the rate of positive malignant nodes increased when the number of retrieved lymph nodes was 9 or more. Wu et. al.[21] reported that the smallest number of lymph nodes for predicting the survival of the patient was 16. The NCCN recommended that the number of lymph node retrieval should be at least 8.[18] Several studies also showed that finding negative regional lymph nodes was a better predictor of survival.[21,22]

The necessity of adjuvant treatment in small bowel adenocarcinoma is controversial. Previous data from retrospective studies and meta-analyses suggest some benefit of adjuvant treatment in patients with node positive disease.[6,18,23] The ongoing phase III BALLAD randomized trial investigated the 5-FU/ leuvovorin or 5-FU/leuvovorin plus oxaliplatin regimens compared with observation alone in stages I to III small bowel adenocarcinoma, with the results pending.[24]

Intraluminal metastasis is rare in jejunal adenocarcinoma. Previous studies reported that primary cancers including melanomas, lung or colorectal cancers can metastasize to the small bowel.[25] Possible mechanisms of intraluminal metastasis might include hematogenous spread, peritoneal spread or intraluminal tumor cell translocation, with direct deposit of cancer cells into the mucosa.[26]

Due to the high incidence of tuberculosis in Thailand, there is a need to differentiate between small bowel adenocarcinoma and small bowel tuberculosis. Previous studies showed that small bowel tuberculosis is more likely to present with pulmonary tuberculosis, ascites, multi-segmental lesions and intestinal stricture on CT scans, with rodent-like and ring-like ulcers on endoscopy.[27] Combined clinical, CT, endoscopy and pathologic findings should be most useful for differentiating small bowel tuberculosis and malignancy.

In Thailand, the National Cancer Institute reported only three cases of small bowel adenocarcinoma in 2015.[28] Rongviriyapanich reported a case of stage pT3N0M0 jejunal adenocarcinoma, undergone curative resection with no adjuvant treatment after surgery, who was still healthy at nine months after surgery.[29] In the present case, adjuvant systemic treatment after surgery was given, although the benefit was unclear. Most of cases in the literature received fluoropyrimidine-based regimen or oxaliplatin-based regimen after surgery, although fluoropyrimidine-based regimen might have a better outcome.[6, 23]

Conclusion

Small bowel adenocarcinoma is a rare cancer especially if synchronous lesions are found. Diagnosis requires a high index of suspicion. Small bowel resection with negative margins is the main treatment with curative intent. Options for adjuvant treatment includes fluoropyrimidine or oxaliplatin-based regimens after surgery.

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บทคัดย่อ **รายงานผู้ป่วย มะเร็งลำไส้เล็กพบร่วมกันหลายจุด**

ธีรวุฒิ รักชอบ, พบ.

กลุ่มงานศัลยกรรม โรงพยาบาลบุรีรัมย์

มะเร็งลำไส้เล็กพบได้น้อยมากในกลุ่มของมะเร็งลำไส้ทั้งหมด ในบทความนี้จะรายงานกรณีผู้ป่วยโรคมะเร็งลำไส้เล็กซึ่งพบหลายตำแหน่ง ชนิด Adenocarcinomas (Synchronous Adenocarcinomas of Jejunum) โดยไม่ได้มีความสัมพันธ์กับกลุ่มโรคอื่นๆ ในผู้ป่วยชาย อายุ 49 ปี ที่มาโรงพยาบาลด้วยอาการปวดท้องมา 1 เดือน ผู้ป่วยได้รับการตรวจเอกซเรย์คอมพิวเตอร์ช่องท้องพบว่ามีการหนาตัวที่ส่วนต้นของลำไส้เล็กส่วน jejunum สองตำแหน่ง ซึ่งมีลักษณะเหมือนมะเร็งลำไส้เล็ก ผู้ป่วยได้เข้ารับการผ่าตัดรักษาโดยการตัดลำไส้เล็กส่วน jejunum ออกพร้อมกับก้อนเนื้องอก ผลพยาธิวิทยาพบว่าเป็นมะเร็งลำไส้เล็กชนิด adenocarcinoma และชนิด poorly differentiated ทั้งสองตำแหน่ง มะเร็งลุกลามถึงชั้น serosa ของลำไส้ มีการลุกลามเข้าหลอดเลือดและท่อน้ำเหลืองย่อย ไม่พบการกระจายไปที่ต่อมน้ำเหลือง ผู้ป่วยได้รับการรักษาเสริมด้วยยาเคมีบำบัดสูตร Fluoropyrimidine หลังจากติดตามผู้ป่วย 8 เดือน ไม่พบการกลับเป็นซ้ำหรือกระจายไปที่อื่น โรคมะเร็งลำไส้เล็กซึ่งพบหลายตำแหน่ง ชนิด Adenocarcinomas นั้น การรักษาหลักคือการผ่าตัดนำตัวโรคออกทั้งหมด (segmental resection with negative margin) การวินิจฉัยภาวะนี้ต้องอาศัยชะนีที่น่าสงสัย ส่วนการรักษาคือการผ่าตัดนำรอยโรคออกร่วมกับการให้ยาเคมีบำบัด