

CHINESE MEDICAL SCIENCES JOURNAL

CASE REPORT

Squamous Cell Carcinoma of Small Intestine: a Case Report[△]

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Key words: squamous cell carcinoma; small intestine; perforation

Chin Med Sci J 2014; 29(4):239-241

NEOPLASMS derive from small intestine are rare and most cases are adenocarcinomas and carcinoid.¹ Squamous cell carcinoma of small intestine is even rarer and only few cases reported in literature.¹ In this article, we report a case of a 68-year-old male who underwent a laparotomy due to perforation of the small intestine and was diagnosed with squamous cell carcinoma of the small intestine.

CASE DESCRIPTION

A 68-year-old male Chinese underwent a laparoscopy with removal of an abdominal mass in January 2013. The histopathological examination suggested that the mass was a grade II squamous cell carcinoma, with the primary site unclarified. No evidence of tumor cells metastasis to local lymph nodes was found. After surgery, the patient did not receive any chemotherapy. In August 2013, the patient

took a routine check, in which increased squamous cell carcinoma antigen (56.40 µg/L, normal reference values 0-2 µg/L) and cytokeratin (15.39 µg/L, normal reference values 0-5 µg/L) were observed. He was given 4 cycles of Tegafur Gimeracil Oteracil Potassium Capsule (S1) 60 mg twice a day from day 1 to 14, combined with recombinant human endostatin (Endostar) 15 mg from day 1 to 14. During the treatment, the patient complained of occasional abdominal pain but no other discomfort. No positive signs were detected in abdominal physical examination. No evidence of other new tumor lesions was revealed by routine CT scans. On November 5, 2013, the patient suddenly felt a persistent abdominal pain, accompanied by nausea, vomiting, and diarrhea. Physical examination showed his temperature at 37.7°C, blood pressure dropped to 70/42 mmHg, increased abdominal muscle tension and a slight rebound pain at the hypogastria region. An emergent abdominal CT scan suggested increased edema of the small intestine at the hypogastria region but without subdiaphragmatic free-air (Fig. 1A) compared with a CT image obtained 5 days earlier (Fig. 1B). Purulent ascites was observed with diagnostic abdominal puncture. The patient was diagnosed with acute peritonitis and an emergency laparotomy was performed. A hard lump about 4 cm × 5 cm with partial perforation of the tumor was observed at the small intestine (ileum) approximately 100 cm proximal to the

Received for publication March 10, 2014.

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△Supported by Young Scientists Fund of National Natural Science Foundation of China (81101707), Zhejiang Traditional Chinese Medicine Foundation Project (2014ZB119), Science and Technology Bureau of Jiaying (2012AY1071-2).

ileocecus, and no metastatic nodules were found in the intra-peritoneal cavity, liver, pancreas, and celiac artery and mesenteric root. Histopathological examination of the removed tumor showed "a poorly differentiated squamous cell carcinoma" at the small intestine, with size measured 4 cm× 5cm. Tumor cells were present at all layers of the small intestine and infiltrated the mucosa, submucosa, muscle, serosa, and mesentery (Fig. 2). Mesenteric lymph nodes were negative of tumor cells (0/8), and no evidence of tumor cells was found at both edges of resection. Immunohistochemical test showed tumor protein p63 (+), cytokeratin (CK)5/6 (+), caudal-related homeobox 2 (CDX2) (-), CK20 (-), chromogranin A (CgA) (-), synaptophysin (SYN) (-), thyroid transcription factor-1 (TTF1) (-). Postoperative diagnosis was squamous cell carcinoma of the small intestine with acute perforation.



Figure 1. The CT image of a 68-year-old male patient shows increased edema of the small intestine at the hypogastric region (A) compared with a CT image obtained 5 days earlier (B).

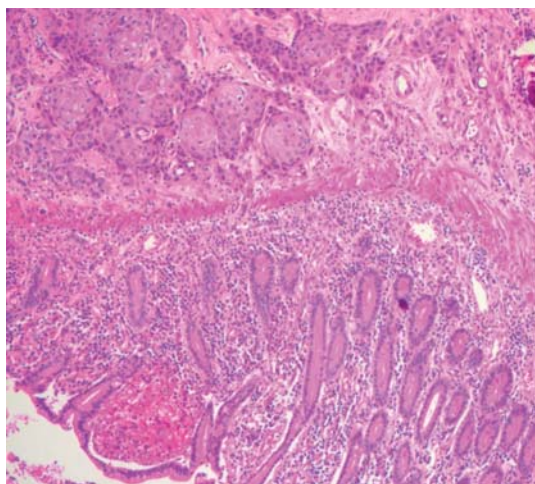


Figure 2. Histopathological examination of the resected lump at the small intestine shows the presence of squamous tumor cells in mucosa, submucosa, muscle, serosa and mesentery. (HE×200)

DISCUSSION

Both primary and metastatic squamous cell carcinoma is a very rare malignancy.² In literature, abdominal pain and acute peritonitis are common symptoms; however, squamous cell carcinoma of the small intestine usually has no specific clinical symptoms and signs. It is often diagnosed after laparotomy as a result of concurrent obstruction or perforation. The etiology of primary small intestine squamous cell carcinoma may be congenital defects of the small intestine, such as intestinal duplication and Meckel's diverticulum.³ The primary neoplastic lesions with metastasis to the small intestine have been reported in the lung, breast, ovary, melanoma, liver and tongue.⁴⁻⁷ Histologically, well differentiated squamous cell carcinoma has a high proportion of large, differentiated, keratinocyte-like squamous cells and a low proportion of small basal-type cells.⁸ Basal-type cells presents predominantly in poorly differentiated squamous cell carcinoma.⁸

In this case report, the patient initially received an abdominal tumor mass resection (grade II squamous cell carcinoma) and the origin of the tumor was unclear. Seven months later, a squamous cell carcinoma of the small intestine with acute perforation was diagnosed. Based on the previous reports, if the majority of cancer cells are deep in the wall of the small intestine, only a few at mucosa, the small intestine tumors may be metaplasia.⁷ The criteria for metastatic tumors of the small intestine are: a clearly primary lesion; the presence of symptoms such as obstruction, perforation and bleeding; positive histopathological findings after laparotomy; no signs of a direct invasion by the original tumors from intraperitoneal cavity. The gross observation during laparotomy found that a tumor lesion located at the small intestine, partial perforation. The primary lesion of the abdominal mass of this case has not been clarified, and in analysis of the intestinal resection specimen, the serosal surface was smooth. This observation helps us rule out the adjacent tumor invasion. We consider that in this case, squamous cell carcinoma of the small intestine is most likely to be the primary lesion.

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