Case Report

Isolated Right External Iliac Lymph Node Recurrence from a Primary Cecum Carcinoma: Report of a Case

Masahiro Uehara¹, Seiichiro Yamamoto¹, Shin Fujita¹, Takayuki Akasu¹, Yoshihiro Moriya¹ and Atsushi Morisue²

¹Division of Colorectal Surgery, National Cancer Center Hospital, Tokyo and ²Division of Surgery, Hino Municipal Hospital, Hino, Tokyo, Japan

Received July 23, 2006; accepted October 28, 2006

Isolated lymph node recurrence in the right external iliac region in cases of cecum carcinoma is extremely rare, and the significance of surgical resection for isolated lymph node recurrence has not been established due to the low number of such cases. We report the first case of isolated right external iliac lymph node recurrence from a primary cecum carcinoma, successfully treated by surgical resection.

Key words: cecum carcinoma – isolated lymph node recurrence – surgical resection

INTRODUCTION

In most carcinomas other than colorectal carcinoma, when recurrence is discovered after resection of the primary lesion, they are treated as systemic disease, and salvage surgery is not usually indicated for the recurrent lesion. However, in colorectal carcinoma, resection of the recurrent lesion may improve patient prognosis. In particular, liver metastasis, pulmonary metastasis, and local recurrence are known to be likely to show improved prognosis with surgical resection (1–8). However, with regard to isolated lymph node recurrence, which occurs relatively rarely, although there are some reports of long-term survival following surgical resection, the significance of surgical resection has not been established due to the low number of such cases (9–13). Recently, we encountered a patient with isolated lymph node recurrence in the right external iliac region after radical resection for cecum carcinoma, who underwent en bloc resection of the external iliac vessels and is surviving disease free 18 months after surgery. Isolated lymph node recurrence in the right external iliac region in cases of cecum carcinoma is extremely rare and has not been reported previously in the literature.

CASE REPORT

A 67-year-old male was referred to the Division of Colorectal Surgery, National Cancer Center Hospital, Tokyo, Japan, in November 2002 for the treatment of cecum carcinoma. There was no evidence of metastasis by chest and abdominal computed tomography (CT) scan, except lymph node swelling near the primary lesion. Open right hemicolectomy with lymph node dissection was performed. Macroscopically, the primary lesion appeared to have invaded the abdominal wall in the lower right abdomen, and therefore we performed resection by scraping part of the transverse muscle of the abdomen. The tumor was staged as Stage IIIC (TNM classification), which refers to a moderately-to-poorly differentiated adenocarcinoma. It measured 45 mm in maximal diameter and extended through the bowel wall to the serosa, but not into the abdominal wall (Fig. 1).

Adjuvant chemotherapy was performed using 5-fluorouracil (5-FU) and l-leucovorin (LV). The administration schedule consisted of a 2-h intravenous infusion of 1-LV (250 mg/m²) and an intravenous bolus injection of 5-FU (600 mg/m²) given 1 h after the start of 1-LV infusion. The regimen was repeated every 7 days for 4 weeks with a 2-week pause. 5-FU and 1-LV were administered 16 times over 6 months. The patient was then followed by a periodic check-up until his carcinoembryonic antigen (CEA) level increased to 12.8 mg/dl in April 2004, at which time an induration in the lower right abdominal wall, close to the
groin, was detected by palpation. The CT scan delineated a mass on the abdominal side of the right external iliac vessels and positron emission tomography (PET) showed a hot spot in the same region. At this point, we considered the possibility of lymph node recurrence, but there were no reported cases of lymph node metastasis occurring in this region after resection of cecum carcinoma and we were also not able to exclude the possibility of peritoneal dissemination. For these reasons, chemotherapy was performed using l-LV, 5-FU and irinotecan. The administration schedule consisted of a 2-h intravenous infusion of l-LV (10 mg/m²) and an intravenous bolus injection of 5-FU (400 mg/m²) given 1 h after the start of l-LV infusion, followed by a 1.5 h intravenous infusion of irinotecan (100 mg/m²). The regimen was repeated every 14 days for 4 weeks with a 1-week pause. l-LV, 5-FU and irinotecan were administered 12 times over 7 months. During this period, the CEA level gradually reduced but chest and abdominal CT performed in October 2004 still showed a mass measuring 23 mm on the abdominal side of the right external iliac vessels without a clear boundary with the blood vessels. On both CT and PET, there was no finding of recurrence in other regions (Fig. 2). At this point, we decided to perform surgical resection.

Surgery was performed in November 2004. After laparotomy, there was no finding of metastasis or recurrence in the abdominal cavity, except for the mass in the right external iliac region outside the peritoneum. The mass was fixed to the abdominal side of the right external iliac vessels and in order to increase local radicality, en bloc resection with external iliac vessels was performed (Fig. 3). The blood vessels were successfully reconstructed by end-to-end anastomosis. The patient had a favorable post-operative progress and was discharged from the hospital without complications.

In the resected specimen, the cross-section of the tumor showed a smooth margin, uniform interior and clear boundary with the blood vessels. H & E staining of the tumor confirmed the finding of lymph node recurrence of colorectal cancer without invasion into the right external iliac vein, but showed that the capsule of the lymph node came in contact with the blood vessels (Fig. 4). No anti-tumor effect of chemotherapy was observed. Eighteen months after the operation, the patient is surviving recurrence free.

DISCUSSION

There has been no previous report of isolated metastasis in the right external iliac lymph nodes after radical resection for colorectal cancer without invasion into the right external iliac vein.
Isolated right external iliac lymph node recurrence

cecum carcinoma in the literature. The patient reported underwent surgical resection following chemotherapy and is surviving recurrence free. Generally, lymph node recurrence after colorectal cancer surgery is regarded as systemic disease, and in such cases, chemotherapy, radiotherapy or a combination of both, rather than surgery, is selected. With regard to isolated lymph node recurrence such as this case, there are some reports of resection, but the significance of surgical treatment remains unclear (9–13). Of the previous cases, one patient survived 19 months disease free, one patient survived 36 months although the patient developed hepatic metastasis and was successfully resected, and the other patient died after 18 months as a result of peritoneal dissemination without lymph node recurrence. (9, 11, 12). If there is no finding of recurrence in other regions and surgery is not difficult to perform, then it may be necessary to consider surgery.

An interesting aspect about this particular case is the lymphatic pathway the cecum carcinoma followed to metastasize to the lymph node in the right external iliac region. Most lymphatic pathways run along arteries and it is generally considered that the lymphatic system from cecum carcinoma usually extends to the root of the superior mesenteric artery along the ileocolic artery (14). Lymphatic pathways running to the right external iliac region have not been reported to date. In this case, although obvious tumor invasion into the abdominal wall was not detected histopathologically in the primary lesion, tumor invasion into the abdominal wall was suspected macroscopically at the time of the first operation. One possibility is that the tumor invaded part of the abdominal wall microscopically and then metastasized to the lymph node in the region of the right external iliac artery through a lymphatic pathway along the right inferior epigastric artery.

Isolated lymph node recurrence rarely occurs in colorectal cancer and there is no agreement regarding surgical indication for this condition. However, in surgical treatment for liver and pulmonary metastases, the minimum requirement is local control (1–8). In our case, favorable local control was achieved by initial surgery and, therefore, surgical resection was indicated for recurrent lesion, because of the possibility of achieving long-term prognosis. With regard to en bloc resection of blood vessels, it goes without saying that there is a fear of increased risk of complications. However, from the oncological viewpoint, en bloc resection of the right common iliac artery and the external iliac artery with the adjacent lymph nodes is preferable. For isolated lymph node recurrence of colorectal carcinoma, surgical resection should be considered, if favorable local control has been achieved. However, further cases need to be accumulated with regard to treatment outcome.

Conflict of interest statement
None declared.

References