

## CASE REPORT

# Combined resection of re-recurrent lateral lymph nodes and external iliac vein : Case Report and Literature

Koji Komori, Takashi Kinoshita, Taihei Oshiro, Seiji Ito, Tetsuya Abe, Yoshiki Senda, Kazunari Misawa, Yuichi Ito, Norihisa Uemura, Seiji Natsume, Eigi Higaki, Akira Ouchi, Masayuki Tsutsuyama, Takahiro Hosoi, Itaru Shigeyoshi, Byonggu An, Tomoyuki Akazawa, Daisuke Hayashi, Hideharu Tanaka, Tairin Uchino, Aina Kunitomo, and Yasuhiro Shimizu

*Department of Gastroenterological Surgery, Aichi Cancer Center Hospital, Nagoya, Aichi, Japan*

**Abstract :** Herein, we describe the operative procedure for combined resection of re-recurrent lateral lymph nodes and the external iliac vein. There is no consensus on the clinical implications of resection of locally recurrent colorectal tumors, as the operative procedure is extremely difficult. We present the case of a 52-year-old woman who underwent abdominoperineal resection. About one year later, we excised a recurrent lymph node in the left lateral obturator area through an extraperitoneal approach. About 18 months later, lymph node re-recurrence in the left external iliac area was observed. Re-recurrent lymph nodes directly invade the left external iliac vein. We removed the re-recurrent lymph node with combined, radical segmental resection of the left external iliac vein, left obturator artery and vein, and left obturator nerve. *J. Med. Invest.* 65 : 136-138, February, 2018

**Keywords :** Re-recurrent lateral lymph node, combined resection of external iliac vein

## INTRODUCTION

The Japanese Society for Cancer of the Colon and Rectum Guidelines 2014 state that “The extent of spread of the recurrent tumor is evaluated by diagnostic imaging, and resection is considered only for patients in whom complete resection can be expected” (1). However, there is no recommendation for management of a locally re-recurrent tumor. We surmised that a recurrent colorectal tumor was more likely to be completely resected than a re-recurrent tumor if distant recurrences could be predicted. Herein, we report the operative approach for combined resection of re-recurrent lateral lymph nodes and internal and external iliac veins.

## CASE PRESENTATION

A 52-year-old woman was admitted to another hospital with lower abdominal distension, and had undergone abdominoperineal resection (APR) in November 2013, without extended lymph node dissection. However, about one year later, she developed lymph node recurrence in the left obturator area. The patient was subsequently referred to our hospital (Aichi Cancer Center Hospital, Nagoya, Japan).

We reoperated in October 2014, and excised the recurrent lymph node through an extraperitoneal approach. Recurrence in the left lung was suspected and ruled out in December 2014. Additionally, right breast skin recurrence was suspected and ruled out in August 2015. In February 2016, lymph node re-recurrence in the left external iliac area was identified on computed tomography and positron emission tomography.

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Address correspondence and reprint requests to Koji Komori, M.D., Department of Gastroenterological Surgery, Aichi Cancer Center Hospital 1-1, Kanokoden, Chikusa, Nagoya, Aichi 464-8681, Japan and Fax : +81-52-763-5233.

## TECHNIQUE

Re-reoperation was performed in March 2016. The re-recurrent lymph node was surrounded by the peritoneum anteriorly and caudally, the sciatic nerve posteriorly, the bladder wall internally, the internal obturator muscle laterally, and the external iliac artery and vein superiorly. Re-recurrent lymph nodes directly invade the left external iliac vein. As a consequence, the left external iliac vein, left obturator artery and vein, and left obturator nerve must undergo combined, radical segmental resection.

(1) First, we approached the recurrent lymph node through both intraperitoneal and extraperitoneal routes. The peritoneum covering the left internal and external iliac vessels was dissected in an anterior to posterior direction to ensure an adequate visual field. Severe adhesions made access to the recurrent lymph node difficult.

(2) Second, from the interior, the peritoneum and bladder wall were detached in a lateral through caudal direction.

(3) Third, the left common iliac artery and vein, left internal iliac artery and vein, and left external iliac artery and vein were exposed along their courses by removing fatty tissue. The left external iliac artery and vein and left ureter were marked with colored tape (Figure 1A).

(4) Fourth, the left external iliac vein was combined radical resection. Double ligation with transfixing must be needed in the case of left external iliac vein at central and periphery sites. The sciatic nerve could be visualized (Figure 1B) (Figure 2).

(5) Intraoperative rapid histopathologic examination of the stump of the left external iliac vein found no cancer cells. R0 status was confirmed.

After the operation, left lower extremity edema appeared, but spontaneously resolved. The patient was discharged without any symptoms 10 days after surgery.

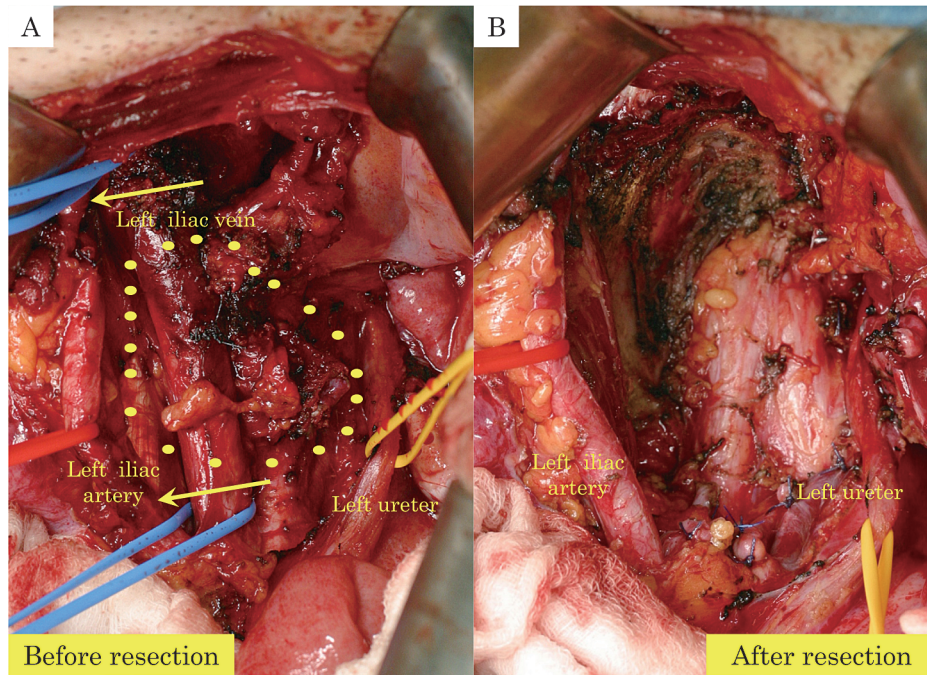


Figure 1 : Intraoperative images. The left side shows the area before resection (A) and the right shows the area after resection (B). On the left side, yellow dots encircle the re-recurrent lateral lymph node (A). On the right side, red tape indicates the external iliac artery, blue tape indicates the external iliac vein, and yellow tape indicates the left ureter (B).

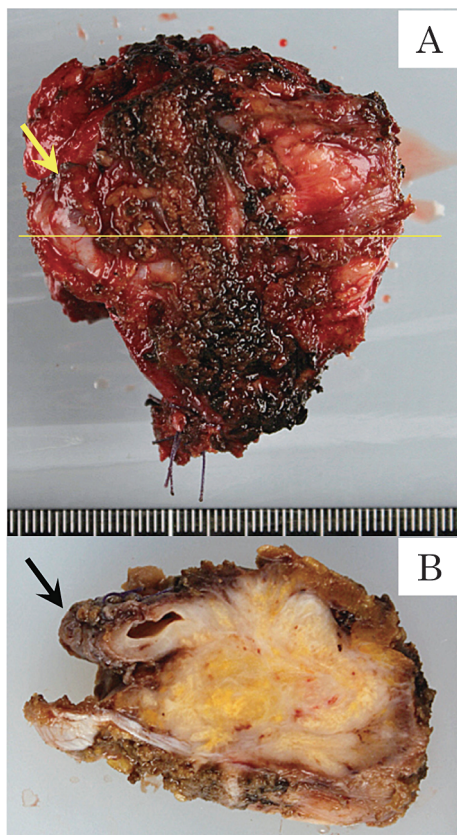


Figure 2 : Resected specimen. The upper side shows the fresh resected specimen and yellow arrow shows resected external iliac vein (A). The lower side shows the carcinoma in the cleavage plane black arrow shows resected external iliac vein (B).

## DISCUSSION

The Japanese Society for Cancer of the Colon and Rectum Guidelines 2014 stated that “The extent of spread of the recurrent tumor is evaluated by diagnostic imaging, and resection is considered only for patients in whom complete resection can be expected” (1).

However, there was no recommendation for re-recurrent local tumors. There are few reports on operative management of re-recurrent rectal tumors, as the operative procedure is extremely difficult, and many cases receive systemic chemotherapy or radiation (2).

Similarly, there is no consensus on frequent resection in the case of hepatic metastasis. However, Kulik *et al.* reported that recurrent colorectal liver metastasis surgery is feasible, with morbidity and mortality rates similar to those for resection of initial or single colorectal liver metastases (3).

We surmised that the indication for resection of re-recurrent colorectal tumors was independent of the number of lesions. Complete resection of re-recurrent colorectal tumors was more likely if distant recurrences could be predicted. If distant recurrences are detected in multiple organs, the order of resection will first include intraabdominal re-recurrent local tumors, followed by secondary hepatic re-recurrences, and finally pulmonary re-recurrences.

The combined radical resection of vessels in the treatment of locally re-recurrent colorectal tumors remains a significant problem. However, Brown *et al.* reported that en bloc vascular resection and reconstruction for contiguous tumor involvement is feasible and safe in selected patients (4). Advanced pelvic tumors involving iliac vessels should not be precluded from curative surgery in specialized institutions. Maslekar *et al.* also reported division of the external iliac artery with vascular clamps to remove a mass en bloc for histopathologic R0 resection (5). A vein graft restored arterial flow and venous drainage was left to travel via collaterals.

Abdelsattar *et al.* reported on 11 patients who underwent vascular reconstruction (3 aorta, 5 common iliac, 3 external iliac) with no graft complications ; graft patency at 4 years was 100% with no mortality. Overall and disease-free survival rates were comparable to those found with locally advanced disease in nonvascular structures (6).

The operative procedure for combined resection of the external iliac vein and re-recurrent lateral lymph nodes is very difficult, but critically important, and the technique should be learned.

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#### ETHICAL STATEMENTS

The Ethics Committee of Aichi Cancer Center Hospital approved this manuscript and agreed to submission to The Journal of Medical Investigation. The subject gave informed consent, and patient anonymity was preserved.

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