

Case Report

Isolated Lateral Pelvic Lymph Node Recurrence after Polypectomy for Malignant Rectal Polyp: A Case Report

Chun-Ho Chu^{1*}, Yi-Hsin Liu²

¹Department of Surgery, Koo Foundation, Sun Yat-Sen Cancer Center, Taipei, Taiwan

²Department of Pathology, Koo Foundation, Sun Yat-Sen Cancer Center, Taipei, Taiwan

Abstract

Due to fecal occult blood screening, more patients undergo endoscopic polypectomy for T1 rectal cancer. Active surveillance is more favorable for patients with a low risk of lymph node metastasis. In general, lymph node metastases occur in the mesorectum or alongside the inferior mesenteric artery. The incidence of lateral pelvic lymph node (LPLN) metastasis in patients with T1 rectal cancer is very low. We experienced a case of LPLN recurrence 42 months after polypectomy for T1 lower rectal cancer. There are no guidelines for treating patients with isolated LPLN metastatic recurrence. Lateral lymph node dissection can be performed with curative intent. Adjuvant radiotherapy and chemotherapy are reasonable.

Keywords: Isolated lateral lymph node metastatic recurrence, lateral lymph node dissection, rectal cancer

INTRODUCTION

Lymphatic drainage from the entire rectum occurs parallel to the superior rectal artery and up to the inferior mesenteric artery. However, lymphatic drainage below the peritoneal reflection can also extend laterally to the pelvic sidewall nodes.^[1] These lateral pelvic lymph nodes (LPLNs) are located primarily along the obturator and internal iliac vessels.^[1] 6%–12% of patients with T1 rectal cancer experience lymph node metastasis along the inferior mesentery artery, and <1% experience lymph node metastasis to the LPLNs. Approximately 10%–25% of patients with locally advanced rectal cancer experience LPLN metastasis.^[2] LPLN metastasis is a major cause of locoregional recurrence. Therefore, in

Japan, total mesorectal excision (TME) with lateral lymph node dissection (LLND) is generally performed for the treatment of T3–4 rectal cancer below the peritoneal reflection and not for T1 rectal cancer.^[3,4]

The standard surgery for T1 rectal cancer is TME. However, endoscopic treatment is only suggested for patients with T1 rectal cancer with a low risk of lymph node metastasis.^[5,6] Salvage TME is indicated when mesorectal lymph node metastases are detected. However, there is no standard strategy for treating LPLN metastasis recurrence. LLND is

Address for correspondence: Dr. Chun-Ho Chu,
Department of Surgery, Koo Foundation, Sun Yat-Sen Cancer Center, 125,
Lide Ro, Beitou District, Taipei, Taiwan.
E-mail: chchu@kfscscc.org

Submitted: 01-Apr-2024 Revised: 06-May-2024

Accepted: 28-May-2024 Published: 05-Sep-2024

Access this article online

Quick Response Code:



Website:
<https://journals.lww.com/jcrp>

DOI:
10.4103/ejcrp.eJCRP-D-24-00005

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

How to cite this article: Chu CH, Liu YH. Isolated lateral pelvic lymph node recurrence after polypectomy for malignant rectal polyp: A case report. J Cancer Res Pract 2024;11:122–4.

suggested if resection is possible. Isolated LPLN metastasis after TME has been previously reported in five patients, and to our knowledge, our case is the first case of LPLN metastasis after the endoscopic removal of a malignant rectal polyp.

CASE REPORT

A 53-year-old healthy female without a family history of colorectal cancer was referred to our hospital in September 2018 to treat T1 lower rectal cancer post polypectomy. Her initial presentation was anal bleeding, and she underwent colonoscopy at a local hospital, which revealed a polyp (0-Is) approximately 1.5 cm × 1.8 cm in size at 4 cm above the anal verge. One piece was subjected to hot snare polypectomy. Pathology revealed moderately differentiated adenocarcinoma extending to the submucosa. The deep margin was not affected by carcinoma. However, the margin distance was only 0.6 mm. There was focal lymphovascular permeation, but no perineural invasion. The treatment recommendation of our multidisciplinary team was low anterior resection with TME or chemoradiotherapy. However, the patient preferred follow-up only [Figure 1a]. Her condition was disease free until March 2022. Periodic computed tomography (CT) of the abdomen and pelvis revealed a 16-mm lymph node located in the left internal iliac region [Figure 1b]. Positron emission tomography CT revealed a hot spot in the left pelvic region [Figure 1c]. No other metastases or metachronous colon cancer were identified. Her serum carcinoembryonic antigen and carbohydrate antigen 19-9 levels were within normal limits. A case of left LPLN recurrence was diagnosed without percutaneous biopsy. We performed laparoscopic left LLND in April 2022 [Figure 2]. There was one ill-defined tumor measuring 1.8 cm × 1.8 cm × 1.8 cm in size. Histologically, the resected tissue had the same characteristics as the primary rectal cancer, and the sampled margin was free of adenocarcinoma [Figure 3]. In addition, there was another free lymph node. The postoperative course was uneventful. The patient received concurrent chemoradiotherapy consisting of 5000 cGy radiation delivered in 25 fractions and tegafur-uracil. Finally, she was treated with 12 cycles of fluorouracil, leucovorin, and oxaliplatin as adjuvant chemotherapy. She tolerated therapy well except for paresthesia. The patient remained healthy without evidence of recurrence after 2 years of follow-up at an outpatient clinic.

DISCUSSION

With the increasing use of fecal immunochemical tests, many patients are being diagnosed with malignant rectal polyps. Managing malignant rectal polyps is challenging because of local recurrence, lymph node metastasis and functional preservation. The risk factors for lymph node metastasis in patients with malignant rectal polyps include deep submucosal invasion, lymphovascular invasion, non well or moderately differentiated adenocarcinoma, positive resection margins, piecemeal resection and high-grade tumor budding.^[7-9]

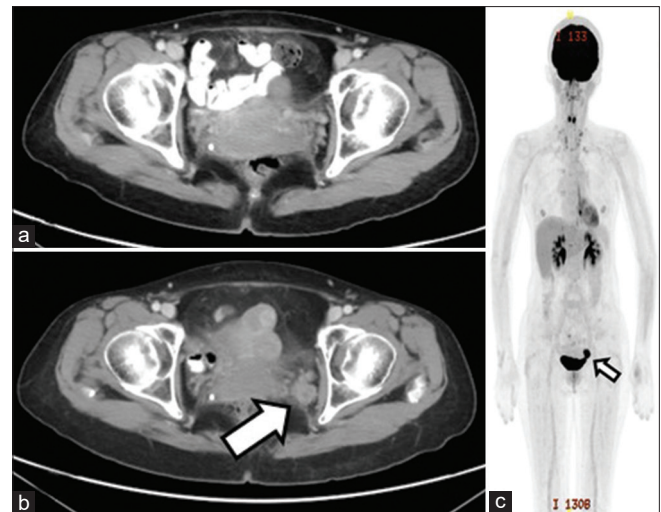


Figure 1: Contrast-enhanced computed tomography and positron emission tomography (a) after polypectomy, (b) recurrence (arrow), and (c) a small mildly hypermetabolic lesion in the left pelvic region (arrow)

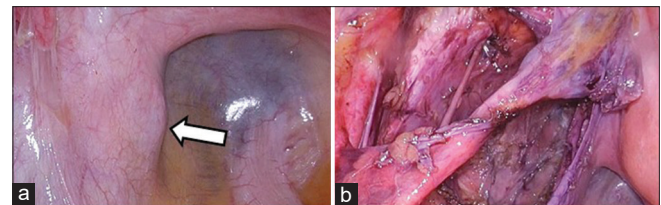


Figure 2: Surgical findings during laparoscopy: (a) a bulging nodule behind the peritoneum and (b) *en bloc* resection with anterior division of the internal iliac vessels

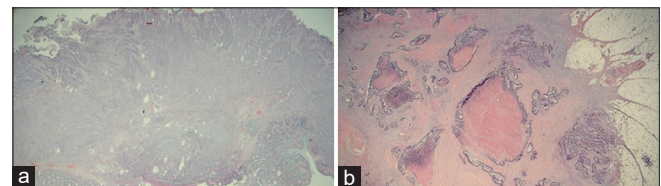


Figure 3: H and E staining of the resected specimen. (a) The polypoid rectal lesion showed moderately differentiated adenocarcinoma invading the submucosal layer. (b) The resected lateral pelvic lymph node contained metastatic adenocarcinoma of colorectal origin

Surveillance is recommended for patients with malignant rectal polyps without poor prognostic features after *en bloc* endoscopic resection.^[5,6] In these patients, no further imaging assessment or imaging surveillance is recommended. Radical surgery or chemoradiotherapy is recommended if a tumor patient has at least one risk factor.^[5,6] However, the benefit of prophylactic LLND is limited.^[3,4] There is a paucity of data for imaging surveillance in patients with high risk factors for lymph node metastasis who do not undergo oncological resection.

Although isolated LPLN metastasis is regarded as a distant metastasis in the West, there is no standard therapeutic strategy. The significance of surgery alone is unclear, and bilateral dissection has greater benefits for reducing local

Table 1: Review of reported cases of isolated lateral pelvic lymph node metastasis in patients with T1 rectal cancer

Case	Author	Location	Interval after 1 st treatment (months)	Bilateral or unilateral LLND	Adjuvant therapy after LLND	Recurrence (months followed)
1	Hara	Lower	22	Unilateral	None	Free (44)
2	Yamaguchi	Lower	Synchronous	Unilateral	5-fluororacil	Free (38)
3	Sueda	Lower	6	Unilateral	None	Free (12)
4	Ogawa	Lower	Synchronous	Unilateral	Tegafur - uracil	Free (48)
5	Tanishima	Upper	6	Unilateral	FOLFOX	Free (30)
6	Ours	Lower	42	Unilateral	Chemo-radiation + FOLFOX	Free (24)

LLND: Lateral lymph node dissection, FOLFOX: Fluorouracil, leucovorin, and oxaliplatin

recurrence than unilateral dissection. However, bilateral LLND requires a longer operative time. Therefore, the combination of chemotherapy and radiotherapy can reasonably decrease distant and local recurrence. In all reported cases, including ours, the patients with isolated LPLN metastasis were treated successfully via unilateral dissection on the affected side.^[10] With regard to adjuvant chemotherapy, two patients in the reported cases refused chemotherapy after surgery. Only our patient received postoperative radiotherapy [Table 1].

Clear images obtained during laparoscopy have significant advantages for LLND, especially for identifying vessels. Technically, we performed *en bloc* resection with anterior division of the internal iliac artery. It may be argued that resection should be limited to enlarged lymph nodes. However, sometimes it is difficult to separate the metastatic lymph node from vessels. Resection of only enlarged lymph nodes is associated with a greater risk of unexpected bleeding, tumor spillage and positive margins. *En bloc* resection with anterior division of the internal iliac artery is much safer.

In conclusion, we reported a case of LPLN recurrence after polypectomy for pT1 lower rectal adenocarcinoma. Although this disease is rare, follow-up CT of the pelvis should be performed every 6–12 months as for patients with advanced-stage disease. If isolated lymph node recurrence occurs, LLND accompanied by adjuvant chemoradiotherapy might lead to a favorable prognosis.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understands that her name and initial will not be published and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

Acknowledgment

The authors would like to thank all colleagues who care the patient.

Data availability statement

All data generated or analyzed during this study are included in this published article [and its supplementary information files].

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

- Morikawa E, Yasutomi M, Shindou K, Matsuda T, Mori N, Hida J, *et al.* Distribution of metastatic lymph nodes in colorectal cancer by the modified clearing method. *Dis Colon Rectum* 1994;37:219-23.
- Sugihara K, Kobayashi H, Kato T, Mori T, Mochizuki H, Kameoka S, *et al.* Indication and benefit of pelvic sidewall dissection for rectal cancer. *Dis Colon Rectum* 2006;49:1663-72.
- Fujita S, Mizusawa J, Kanemitsu Y, Ito M, Kinugasa Y, Komori K, *et al.* Mesorectal excision with or without lateral lymph node dissection for clinical stage II/III lower rectal cancer (JCOG0212): A multicenter, randomized controlled, noninferiority trial. *Ann Surg* 2017;266:201-7.
- Hashiguchi Y, Muro K, Saito Y, Ito Y, Ajioka Y, Hamaguchi T, *et al.* Japanese Society for Cancer of the Colon and Rectum (JSCCR) guidelines 2019 for the treatment of colorectal cancer. *Int J Clin Oncol* 2020;25:1-42.
- Shaukat A, Kaltenbach T, Dominitz JA, Robertson DJ, Anderson JC, Cruise M, *et al.* Endoscopic recognition and management strategies for malignant colorectal polyps: Recommendations of the US multi-society task force on colorectal cancer. *Gastroenterology* 2020;159:1916-34.e2.
- Saraiva S, Rosa I, Fonseca R, Pereira AD. Colorectal malignant polyps: A modern approach. *Ann Gastroenterol* 2022;35:17-27.
- Netzer P, Forster C, Biral R, Ruchti C, Neuweiler J, Stauffer E, *et al.* Risk factor assessment of endoscopically removed malignant colorectal polyps. *Gut* 1998;43:669-74.
- Nascimbeni R, Burgart LJ, Nivatvongs S, Larson DR. Risk of lymph node metastasis in T1 carcinoma of the colon and rectum. *Dis Colon Rectum* 2002;45:200-6.
- Park JJ, Cheon JH, Kwon JE, Shin JK, Jeon SM, Bok HJ, *et al.* Clinical outcomes and factors related to resectability and curability of EMR for early colorectal cancer. *Gastrointest Endosc* 2011;74:1337-46.
- Tanishima H, Kimura M, Tominaga T, Iwakura S, Hoshida Y, Horiuchi T. Lateral lymph node metastasis in a patient with T1 upper rectal cancer treated by lateral lymph node dissection: A case report and brief literature review. *Surg Case Rep* 2017;3:93.