UDC 616.33-002.1:616-006.44-06(477)
DOI http://doi.org/10.30978/GS-2024-4-68

ISSN 2786-5584 print
ISSN 2786-5592 online

A case of metachronous ascending colon cancer and synchronous primary rectal and duodenal cancer in a patient with Lynch syndrome

Y. M. Susak[1], I. M. Leschyshyn[1], O. M. Lobanova[2]

[1] Bogomolets National Medical University, Kyiv
[2] Kyiv City Clinical Emergency Hospital

✉ Prof. Yaroslav Susak: yarsus@ukr.net

Y. M. Susak, http://orcid.org/0000-0002-5102-485x
I. M. Leschyshyn, http://orcid.org/0000-0003-1429-2756
O. M. Lobanova, http://orcid.org/0000-0002-0332-0021

Multiple primary malignant tumours (MPMTs) are defined as the simultaneous or sequential occurrence of two or more primary malignant tumours in a single patient, which may originate from the same organ, paired organs, different parts of the same system, or different organs. Synchronous MPMTs develop within 6 months of the primary tumour, while metachronous ones occur more than 6 months later. The available sources have no information on metachronous or synchronous colorectal and duodenal cancer.

Objective — to present treatment outcomes of a rare case of metachronous ascending colon cancer and synchronous primary rectal and duodenal cancer in a patient with Lynch syndrome.

A male patient, born in 1963, underwent a right-sided hemicolectomy for ascending colon mucinous adenocarcinoma — stage III ($pT_{4p}N_1M_0$) — in 2002. In the summer of 2022, he complained of pain in the right hypochondrium, nausea, general weakness, and blood in the stool. The examination revealed the presence of synchronous primary cancer in the rectosigmoid section and duodenal cancer. The decision to proceed with a two-stage surgical intervention was based on the partial colonic obstruction. The first stage (September 08, 2022) included the anterior resection of the rectum with sigmo-recto anastomosis ($pT_{4c}N_{2b}M_0$, stage III, R-0). The second stage (December 08, 2022) included the resection of a portion of the descending and lower horizontal parts of the duodenum with duodeno-duodenoanastomosis, followed by Roux-en-Y gastrojejunostomy. The procedure entailed stitching the stomach in the prepyloric section, performing a cholecystectomy, and draining the abdominal cavity (duodenal adenocarcinoma with free margins: R-0). The patient was diagnosed with Lynch syndrome based on immunohistochemistry screening results and genetic studies. After the first and second stages, the patient categorically refused to undergo a course of traditional adjuvant therapy. At the control CT scan 1.9 months after the last operation, there were no signs of prolongatio morbi. A rare case of synchronous rectal and duodenal cancer, demonstrating favourable treatment outcomes after two-stage surgery without standard adjuvant therapy, is described. Patient follow-up is ongoing; therefore, the results may change in the future.

Keywords
metachronous cancer, synchronous primary rectal and duodenal cancer, surgical treatment, Lynch syndrome.

ARTICLE • Received 2024-09-25 • Received in revised form 2024-11-09

Multiple primary malignant tumours (MPMTs) are described as two or more primary malignant tumours that develop simultaneously or sequentially in the same patient. They may originate from the same organ, paired organs, different parts of the same system, or different organs of different systems [20]. The diagnostic criteria for MPMTs require each tumour to exhibit clear malignant histopathological changes, have an independent morpho-embryogenetic pathological type, and not be an invasion or metastasis of a second tumour type. MPMTs are classified as metachronous and synchronous tumours. Synchronous MPMTs are defined as the second primary tumour occurring within 6 months after the first primary tumour, and metachronous MPMTs are defined as the second primary tumour occurring later than 6 months after the diagnosis of the first tumour [13]. MPMTs

were first described by Billroth in 1889, and the first report was published by Warren and Gates in 1932 [20]. A literature review of 1,104,269 cancer patients showed that the incidence of MPMTs ranges from 0.73 % to 11.7 % [8].

Double MPMTs are most commonly diagnosed [10, 25], but three to five MPMTs are also found [4, 17, 22, 24]. The combinations of the locations of the first and second primary cancers can manifest in a variety of ways. Excluding breast and genital cancers in women, the most common primary cancers are thyroid, lung, colon, renal cell, bladder, rectal, and stomach cancers. The most common second primary cancers are lung, thyroid, rectal, bladder, colon, liver, and renal cell cancers [21]. According to X. B. Yang et al. [21], out of the total number of MPMT cases, 1,678 (88.2 %) were metachronous, and 224 (11.8 %) were synchronous [19]. In men, among synchronous cancers, the incidence of colon cancer was the highest among first primary cancers (15.1 %), and the incidence of rectal cancer was the highest among second primary cancers (21.0 %) [19].

After analysing the clinicopathological data from 15,321 patients with malignant neoplasms, S. Zhai et al. [23] discovered that the most prevalent MPMTs were malignant neoplasms in the digestive system. MPMTs were more commonly found in the large intestine (colon and rectum), rather than the stomach [7]. Zhu CL and L. Z. Peng [26] reported the highest frequency of MPMTs in the colon (38.37 %), rectum (33.14 %), and stomach (26.16 %). According to T. Kato et al. [14], MPMTs occur in 10.5 % of cases of colorectal cancer, with gastric cancer being the most frequent neoplasm (44.4 %).

We found no case reports of metachronous or synchronous colorectal and duodenal cancer in the available sources.

Objective — to present treatment outcomes of a rare case of metachronous ascending colon cancer and synchronous primary rectal and duodenal cancer in a patient with Lynch syndrome.

Patient I., a male born in 1963, received two-stage surgical treatment for synchronous primary rectal and duodenal cancer at the Municipal Nonprofit Enterprise «Kyiv City Clinical Hospital of Emergency Medical Care».

In the anamnesis (July 23, 2002), he underwent a right-sided hemicolectomy for ascending colon cancer. Final diagnosis: Colon cancer of stage III, clinical group II ($pT_{4p}N_1M_0$). Pathohistological conclusion: 1. Lymph node — undifferentiated cancer. 2. Colon area — mucinous adenocarcinoma; involvement of all intestinal membranes.

During the postoperative period, he underwent 6 courses of chemotherapy that included 5-fluorouracil and folic acid. According to the patient, he tolerated chemotherapy poorly, with hepatotoxic and emetogenic manifestations.

In the summer of 2022, the patient complained of moderate pain in the right hypochondrium, hypogastric region, nausea, belching, general weakness, sometimes fresh blood in the stool, occasional difficulty defecating, and abdominal bloating. The diagnosis was established based on the examination data (fibrocolonoscopy and fibrogastroduodenoscopy dated June 4, 2022 and computed tomography (CT) dated August 6, 2022): Synchronous primary cancer of the rectosigmoid colon, complicated by mild bleeding (Fig. 1, 2) and retrobulbar duodenal cancer (Fig. 3, 4).

The biopsy results dated August 4, 2022 indicate a low-grade adenocarcinoma of the colon (G1–G2) according to the previous grading system (ICD-O code: 8140/3) and low-grade adenocarcinoma of the small intestine (G1-G2) according to the previous grading system (ICD-O code: 8140/3).

The decision to proceed with a two-stage surgical intervention was based on the partial colonic obstruction.

In the first stage (September 8, 2022), the patient underwent anterior resection of the rectum with «end-to-end» sigmo-recto anastomosis, debridement, and drainage of the abdominal cavity.

During the surgical procedure, we discovered a circular tumour in the upper ampullary region of the rectum, which had spread to the pararectal tissue. The pararectal, bifurcation and para-aortic lymph nodes were enlarged to 0.5—1.0 cm.

Macroscopic specimen after surgery: The rectum with mesorectal tissue and para-aortic lymph nodes. In the intestine, a circular tumour with disintegration and bleeding, which occludes the lumen by 2/3 and grows into the pararectal tissue.

Clinical diagnosis: Cancer of the upper ampullary part of the rectum ($pT_{4c}N_{2b}M_0$, stage III, R-0), clinical group 2. Mild bleeding from a tumour. Partial colonic obstruction. Duodenal cancer.

Pathohistological conclusion (September 16, 2022): Adenocarcinoma of the rectum with invasion of the muscle layer. Tumour growth is not detected at the edges of the resection. Tumour growth is not detected in the mesenteric lymph nodes and para-aortic lymph nodes.

Due to pre-existing complaints, the patient underwent an outpatient examination following the first stage of surgery.

Fibrogastroduodenoscopy (FGDS) dated October 17, 2022: The esophagus has no abnormalities. There is a moderate amount of secretion in the stomach; the gastric mucosa is focally hyperemic.

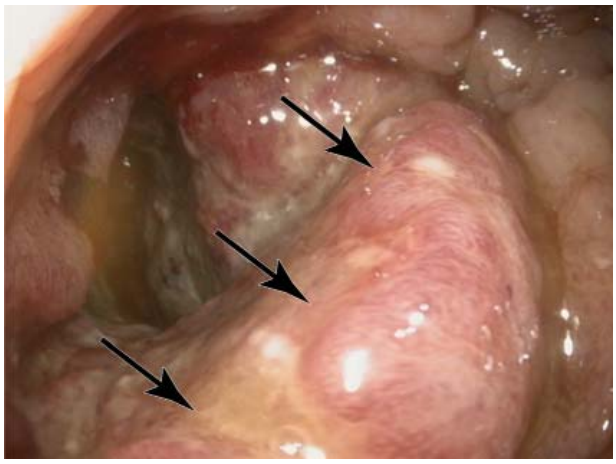

Figure 1. **A circular infiltrative tumour of cartilaginous density is determined at 20 cm, occupying half of the intestinal lumen. The tissues here are amorphous, cyanotic, rigid, nodular, and bleed on contact (arrows)**

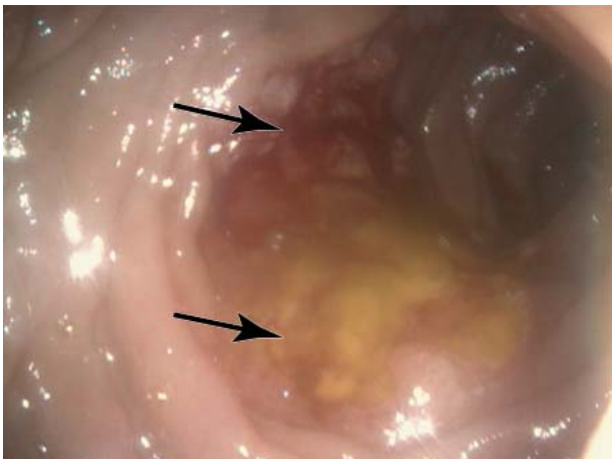

Figure 3. **In the area below the major duodenal papilla, a subcircular ulcer-like defect of the duodenum of infiltrative nature with cartilaginous density is visualized, it bleeds on contact, covered with food (the area does not peristaltize). The duodenal patency is observed during endoscopy (arrows)**

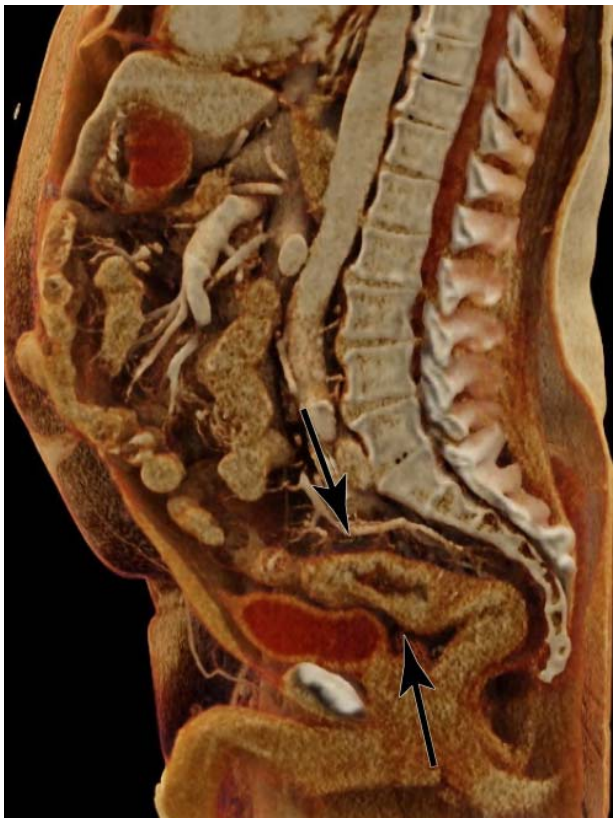

Figure 2. **Preoperative CT reconstruction, 3D visualization. Circular thickening of the rectosigmoid colon wall up to 15 mm. The affected wall has an indistinct, uneven outer contour; the differentiation of the layers is disturbed, and the wall has active contrast enhancement. The surrounding fatty tissue is dense and compacted (arrows)**

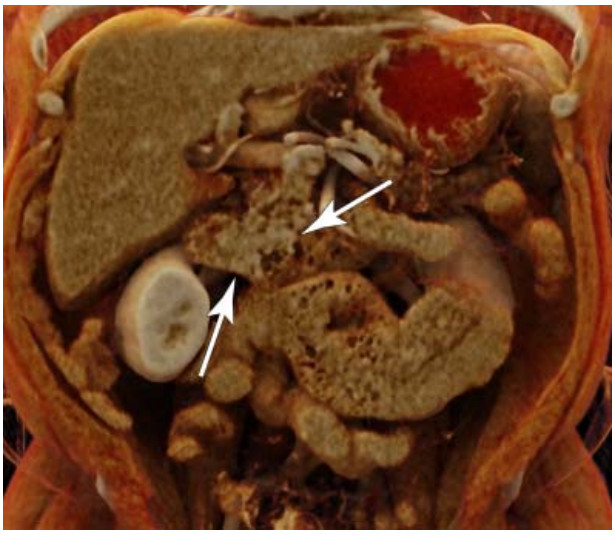

Figure 4. **Preoperative CT reconstruction, 3D visualization. Circular thickening of the wall of the descending and lower horizontal parts of the duodenum up to 10 mm; the lumen of the intestine at this level is unevenly narrowed (arrows)**

In the descending part of the duodenum, there is a neoplasia of approximately 4 cm on the lateral wall; the tissues here are cyanotic, amorphous and bleeding, and the edges are nodular. Biopsy (performed previously).

Conclusion: Duodenal neoplasia; FIIC.

After the operation, the patient was prescribed adjuvant chemotherapy. However, due to the potential severe toxic effects the patient had previously experienced from chemotherapy after the first operation, he flatly refused the proposed therapy. Instead, he independently underwent a course of outpatient treatment using the Greater Celandine extract *(Amitozyn)* [1—3, 12].

The patient reported taking *Amitozyn* for a month (from October 24, 2022 to November 28, 2022), administering 50 mg intravenously in 200 ml of saline every third day, for a total dose of 500 mg. During the first four administrations, hyperthermia was observed to be 37.5—38.5°C, which subsided within 12 hours without the administration of antipyretics. No other reactions to the drug were noted.

An FGDS was conducted on November 28, 2022, in response to the patient's further complaints, subsequent to the first stage of the operation. The esophagus has no abnormalities. A gastric secretion is observed. The duodenal defect in the descending and horizontal sections along the lateral wall has marginally reduced in volume since October 17, 2022; however, its dimensions remain about 4—5 cm. The lumen is unobstructed for the endoscope. The defect measures around 5—7 cm from the pylorus to its proximal margin.

Conclusion: Duodenal neoplasia; FIIC; positive dynamics.

Regarding the duodenal tumour, the patient was offered surgical intervention in the scope of pancreatoduodenal resection (PDR), which he categorically refused but agreed to tumour excision due to the threat of bleeding.

The second stage of the operation (December 08, 2022) was performed: Resection of part of the descending and lower horizontal section of the duodenum with duodeno-duodenoanastomosis, Roux-en Y gastrojejunostomy, through-the-stomach stitching in the prepyloric section, cholecystectomy, and drainage of the abdominal cavity. The operation was without complications.

During the revision in the abdominal cavity, the adhesion process was detected, especially pronounced in the right hypochondrium and subhepatic space; small concrements were found in the gallbladder; and an irregularly shaped, dense tumour measuring 4 × 5 × 3 cm was palpated along the lateral edge in the lower horizontal part of the duodenum. Duodenotomy — the tumour has a glandular structure, easily disintegrates, and bleeds. Regional lymph nodes are not enlarged.

Histopathology report dated December 22, 2022, No. 11436-39: Duodenal adenocarcinoma with free margins (R-0), atrophic cholecystitis, and gallbladder adenosis.

Since the disease exhibited the characteristics typical of Lynch syndrome, additional studies were carried out to confirm it. Initially, immunochemistry (IHC) was used to assess the status of proteins within the mismatch repair (MMR) system. The screening revealed a deficiency (dMMR/MSI-H) characterized by the loss of MSH2 and MSH6, which is typically associated with Lynch syndrome due to an inherited mutation in the MSH2 gene. Genetic tests confirmed the presence of an inherited MSH2 mutation (c.2042C > T (p.Ala681Val)), thereby validating the diagnosis of Lynch syndrome in the patient.

During the postoperative period, suppuration of the retroperitoneal tissue hematoma was noted, which was managed with antibiotic treatment and hematoma drainage.

After surgery, the patient once more declined the recommended adjuvant chemotherapy. The patient reported undergoing outpatient therapy from April 4, 2023, until May 19, 2023 taking *Amitozyn* 50 mg intravenously in 200 ml of saline every third day, for a total dose of 500 mg.

The patient underwent a similar treatment course in January 2024 [1—3, 12]. The total dose was 1500 mg.

Five months after surgical treatment, the patient complained of moderate pain in the epigastric region and heartburn. A gastroscopy was performed (May 16, 2023), during which a superficial peptic ulcer up to 1.5 cm in diameter was detected immediately behind the gastroentero-anastomosis from the side of the small intestine, Fores III. The antrum ends blindly. The afferent loop ends blindly and there are single ligatures. The efferent loop has no abnormalities. The patient underwent an antiulcer therapy course. Control gastroscopy dated June 26, 2023: The ulcer healed. Fifteen months later (September 23, 2024),a during FGDS, erosions of the gastrojejunoanastomosis zone from the side of the small intestine measuring 3—7 mm were detected. The antrum ends blindly and the afferent loop on a segment 15 cm long is unchanged.

After 1.9 months (September 29, 2024), a CT scan of the chest and abdominal cavity, retroperitoneal space, and pelvis was performed with contrast «Tomohexol 350» (120 ml). Interintestinal anastomoses are patent without wall thickening. The

remainder of the colon does not exhibit gross wall thickening. The stomach stump is of sufficient size without wall thickening and the gastrojejunal anastomosis is patent. The afferent loop and duodenal stump are not dilated, without additional pathological formations and wall thickenings.

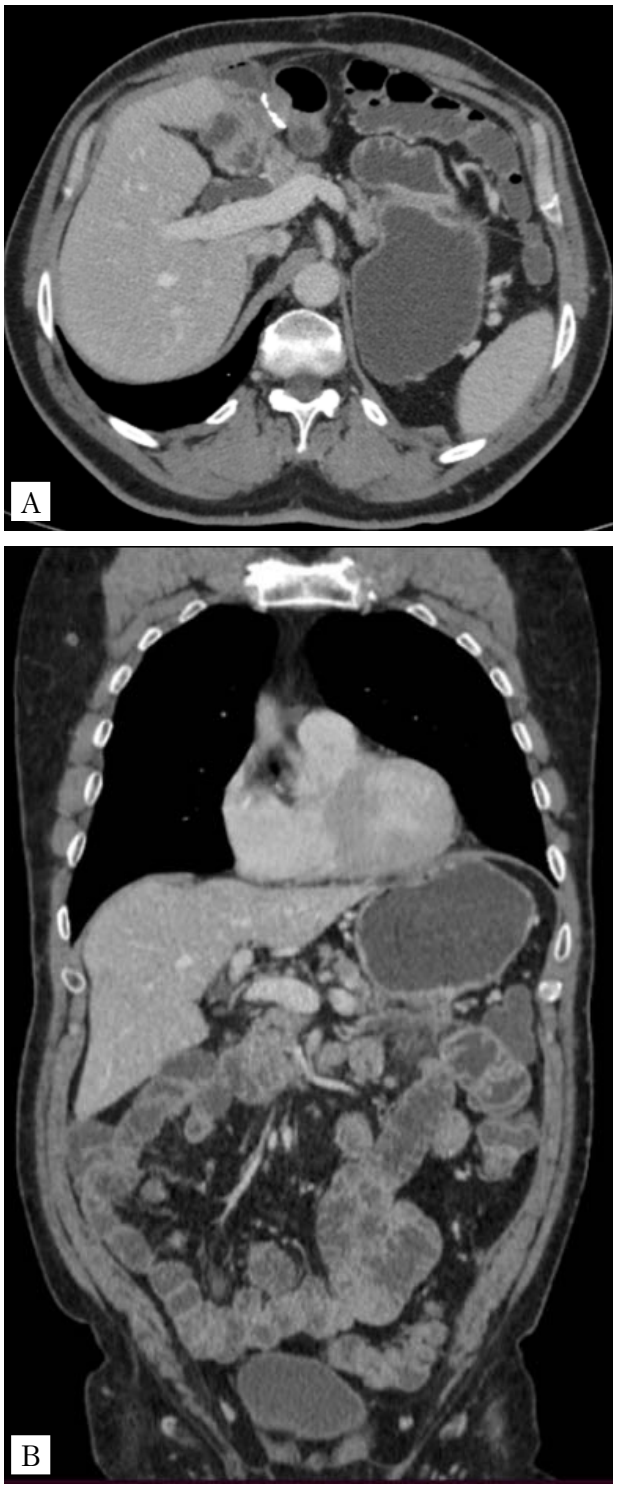

Figure 5. **CT scan of the abdominal cavity with contrast, as of October 10, 2024: axial (A) and frontal (B) projection. There are no signs of prolongatio morbi**

There are no pathologically enlarged retroperitoneal, mesenteric, pelvic, or inguinal lymph nodes. There is no ascites or pneumoperitoneum. There are no peritoneal implants.

The liver has even contours and normal dimensions. No pathological alterations are noted in the internal structure of the organ.

Bone destructive changes are not determined.

Conclusion: Condition after right-sided hemicolectomy and rectal resection. Condition after duodenal resection for cancer. No CT signs of prolongatio morbi (Fig. 5).

According to the SF-36 Score questionnaire, the patient's quality of life indicators one year and nine months after the last operation correspond to the population norm (table).

The indicators of tumour markers of the gastrointestinal tract CA-242 and pancreas CA 19-9 (as of September 12, 2024) are within normal limits (< 0.5 U/ml and < 1.2 U/ml, respectively).

Discussion

The occurrence of metachronous cancer, first of the colon and then of the rectum, among gastrointestinal MPMTs is a common phenomenon [7, 26]. Such a chronological sequence of malignant tumours was also observed in our patient. However, he was diagnosed with duodenal adenocarcinoma simultaneously with rectal cancer, which is rare (< 0.5 % of all gastrointestinal cancers) [6, 15]. Therefore, the adenocarcinoma was synchronous with respect to rectal cancer and metachronous with respect to colon cancer. Such variants of combinations of multiple carcinomas are not given in the literature.

Table. **Patient quality of life indicators 1 year and 9 months after the last surgery according to SF-36 Score**

Item	Percentage
Physical functioning	80
Role limitations due to physical health	100
Role limitations due to emotional problems	100
Energy/fatigue	65
Emotional well-being	80
Social functioning	100
Pain	100
General health	70
Health change	75

In the surgical treatment of synchronous cancer, we chose a two-stage strategy. Initially, we removed the rectal tumour due to the presence of partial colonic obstruction and uncertainty about the scope of the operation for duodenal adenocarcinoma.

The second stage (surgery for duodenal cancer) was planned after standard adjuvant chemotherapy. However, the patient refused the prescribed treatment and independently underwent an outpatient treatment course using the Greater Celandine extract *(Amitozyn)* [1—3, 12].

The lack of studies and limited evidence on the effects of *Amitozyn* use make it difficult to draw conclusions about its potential effectiveness.

After three months, the second stage of operation was performed. Pancreatoduodenal resection was planned. The patient flatly refused the specified volume of surgical intervention, but due to intestinal bleeding, he agreed to resection of the part of the duodenum affected by the tumour. Thus, we performed resection of part of the descending and lower horizontal section of the duodenum with duodeno-duodenoanastomosis, Roux-en-Y gastrojejunostomy, through-the-stomach stitching in the prepyloric section, cholecystectomy, and drainage of the abdominal cavity.

Protective gastric suturing and Roux-en-Y gastroenteroanastomosis were performed to prevent food transit through the duodeno-duodenoanastomosis zone, which made it possible to prevent failure of its sutures.

Roux-en-Y gastroenterostomy presents a higher incidence of anastomotic peptic ulcers. In bariatric surgery, Roux-en-Y anastomotic ulcers are particularly common, accounting for 16 % of cases [18]. This is due to a number of causes, including the action of acid on the mucosa of the small intestine. The Roux-en-Y gastrojejunostomy area is more vulnerable to acid because the alkaline duodenal contents do not neutralize it, unlike other gastrojejunostomies. In our situation, a superficial ulcer up to 1.5 cm in diameter appeared directly below the anastomosis on the small intestine side, five months following surgery. Since the Roux-en-Y anastomosis was performed on the entire stomach, it was probably advisable to reinforce the procedure with a selective proximal vagotomy or selective vagotomy to avoid peptic ulcers. However, the peptic ulcer in this case responds well to standard conservative treatment.

Since the disease exhibited the characteristics typical of Lynch syndrome, namely the occurrence of a tumour at a young age (in our patient at the age of 39 years), most often in the right half of the colon, a high risk of synchronous or metachronous (recurrent) cancer, (as in this case) [9, 16], we conducted additional studies to confirm it after the second stage of the operation. Immunochemistry (IHC) was used to assess the status of proteins within the mismatch repair (MMR) system. The screening revealed a deficiency (dMMR/MSI-H) characterized by the loss of MSH2 and MSH6, which is typically associated with Lynch syndrome due to an inherited mutation in the MSH2 gene. Genetic tests also confirmed the presence of an inherited MSH2 mutation (c.2042C > T, (p.Ala681Val)), which allowed us to diagnose Lynch syndrome in the patient.

Very few studies have identified variants of Lynch syndrome that result in damage to the colon and duodenum. A recent study by N. Hammoudi et al. [11] reported a specific risk of duodenal cancer in Lynch syndrome. The authors identified 154 patients with Lynch syndrome, including 85 patients with MSH2 mutations and 41 patients with MLH1 mutations. Seven of the 154 (4.5 %) had at least one duodenal lesion. Of these 7 patients, three had synchronous colorectal adenocarcinomas. The median age at diagnosis was 58 years (range: 49—73). Twelve lesion locations were: descending duodenum (n = 7), lower part (n = 2), duodenal bulb (n = 1), ampulla (n = 1), and fourth duodenum (n = 1). Three lesions were invasive adenocarcinomas. The incidence of duodenal involvement in patients with pathogenic MSH2 or MLH1 variants was 7.1 % (6 of 85) and 2.4 % (1 of 41), respectively. This suggests that patients with MSH2 mutations tend to have a higher risk of duodenal involvement (RR: 5.17; 95 % CI (0.8—60.07), p = 0.1307.

A. I. Amjad et al. [5] reported the diagnosis of squamous cell cancer in the duodenum of a 58-year-old man with Lynch syndrome. Previous malignancies included two metachronous colorectal adenocarcinomas.

In our case, the histological analysis revealed that the synchronous duodenal and rectal tumours were adenocarcinomas, while the metachronous tumour of the right colon was a mucinous adenocarcinoma. We did not find similar variants of Lynch syndrome in the available literature.

After the second stage, the patient underwent two independent courses of outpatient treatment using the Greater Celandine extract *(Amitozyn)*. The patient's condition is satisfactory 1.9 months later. The quality-of-life indicators, as measured by the SF-36 questionnaire, align with the population norm, and the tumour markers of the gastrointestinal tract (CA-242) and pancreas (CA 19-9) are within normal limits. There are no signs of prolongatio morbi.

The radicality of the surgical intervention can absolutely explain the positive effect of treatment for synchronous rectal and duodenal cancer.

Conclusions

A rare case of Lynch syndrome with synchronous primary rectal and duodenal cancer, which exhibited positive treatment outcomes after two-stage surgery without the use of conventional neoadjuvant and adjuvant therapies, is described. Patient follow-up is ongoing; therefore, the results may change in the future.

Declaration of interests

The authors declare that they have no conflicts of interest.

Funding. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Authors contributions

Work concept and design, writing the manuscript — Y.M. Susak; data collection and analysis — I.M. Leschyshyn, O.M. Lobanova; critical review — Y.M. Susak, I.M. Leschyshyn.

References

1. Гріневич ЮЯ, Ганул ВП, Чорний ВО та ін. Звіт про результати обмежених клінічних випробувань препарату Амітозин хворих на злоякісні новоутворення та вивчення його імуномодулюючих властивостей. Київ, 2001, 17 с. http://www.potopalsky.kiev.ua/docs/pdf/zvit_amitoz-2001.pdf.
2. Осінський СП, Потопальська ЮА, Потопальський АІ. Вивчення протипухлинної і модифікуючої активності амітозину при комплексному застосуванні Матеріали міжнародного науково-практичного форуму «Основи молекулярно-генетичного оздоровлення людини і довкілля» К. 2005 р. 196-199.
3. Потопальский АІ. Препараты чистотела в биологии и медицине. Киев. «Наукова думка». 1992, 239 С.
4. Abdeen Y, Al-Amer M, Taft E, Al-Halawani M. Four synchronous primary tumors in a male patient. J Cancer Res Ther. 2021 Jan-Mar;17(1):258-261. doi: 10.4103/jcrt.JCRT_187_18. PMID: 33723165.
5. Amjad AI, Singhi AD, Balaban EP, Dudley B, Brand RE, Bahary N. First reported case of a squamous cell carcinoma arising in the duodenum in a patient with Lynch syndrome. Int J Clin Exp Pathol. 2014 Dec 1;7(12):8988-95. PMID: 25674277; PMCID: PMC4313961.
6. Buchbjerg T, Fristrup C, Mortensen MB. The incidence and prognosis of true duodenal carcinomas. Surg Oncol. 2015 Jun;24(2):110-6. doi: 10.1016/j.suronc.2015.04.004. Epub 2015 Apr 22. PMID: 25936244.
7. Cheng HY, Chu CH, Chang WH, Hsu TC, Lin SC, Liu CC, Yang AM, Shih SC. Clinical analysis of multiple primary malignancies in the digestive system: a hospital-based study. World J Gastroenterol. 2005 Jul 21;11(27):4215-9. doi: 10.3748/wjg.v11.i27.4215. PMID: 16015692; PMCID: PMC4615445.
8. Demandante CG, Troyer DA, Miles TP. Multiple primary malignant neoplasms: case report and a comprehensive review of the literature. Am J Clin Oncol. 2003 Feb;26(1):79-83. doi: 10.1097/00000421-200302000-00015. PMID: 12576929.
9. Ene CV, Bulai CTLA, Geavlete P, Popescu RI, Vacaroiu IA, Georgescu DE, Isaconi IV, Munteanu MDLA, Ene CD, Militaru A, Geavlete B, Multescu R. New Insights into Lynch Syndrome: A Narrative Review. Chirurgia (Bucur). 2023 Dec;118(6):584-595. doi: 10.21614/chirurgia.2023.v.118.i.6.p.584.
10. Feller A, Matthes KL, Bordoni A, Bouchardy C, Bulliard JL, Herrmann C, Konzelmann I, Maspoli M, Mousavi M, Rohrmann S, Staehelin K, Arndt V; NICER Working Group. Correction to: The relative risk of second primary cancers in Switzerland: a population-based retrospective cohort study. BMC Cancer. 2020 Feb 3;20(1):87. doi: 10.1186/s12885-020-6584-2. Erratum for: BMC Cancer. 2020 Jan 21;20(1):51. doi: 10.1186/s12885-019-6452-0. PMID: 32013907; PMCID: PMC6996171.
11. Hammoudi N, Dhooge M, Coriat R, Leblanc S, Barret M, Bordacahar B, Beuvon F, Prat F, Maksimovic F, Chaussade S. Duodenal tumor risk in Lynch syndrome. Dig Liver Dis. 2019 Feb;51(2):299-303. doi: 10.1016/j.dld.2018.10.005. Epub 2018 Oct 15. PMID: 30448460.
12. Hermant B, Gudrun A, Potopalsky AI, Chroboczek J, Tcherniuk SO. Amitozyn impairs chromosome segregation and induces apoptosis via mitotic checkpoint activation. PLoS One. 2013;8(3):e57461. doi: 10.1371/journal.pone.0057461. Epub 2013 Mar 7. Erratum in: PLoS One. 2013;8(6). doi: 10.1371/annotation/0b7ab40b-2246-4426-a98d-36b028029c5c. Herman, Bastien [corrected to Hermant, Bastien]. Erratum in: PLoS One. 2015 Feb 03;10(2):e0118039. doi: 10.1371/journal.pone.0118039. PMID: 23505430; PMCID: PMC3591406.
13. Kapsinow R. Multiple primary cancer. A classification with report of cases. J La State Med Soc. 1962 Jun;114:194-200. PMID: 14453808.
14. Kato T, Suzuki K, Muto Y, Sasaki J, Tsujinaka S, Kawamura YJ, Noda H, Horie H, Konishi F, Rikiyama T. Multiple primary malignancies involving primary sporadic colorectal cancer in Japan: incidence of gastric cancer with colorectal cancer patients may be higher than previously recognized. World J Surg Oncol. 2015 Feb 7;13:23. doi: 10.1186/s12957-014-0432-2. PMID: 25889477; PMCID: PMC4345022.
15. Meijer LL, Alberga AJ, de Bakker JK, van der Vliet HJ, Le Large TYS, van Grieken NCT, de Vries R, Daams F, Zonderhuis BM, Kazemier G. Outcomes and Treatment Options for Duodenal Adenocarcinoma: A Systematic Review and Meta-Analysis. Ann Surg Oncol. 2018 Sep;25(9):2681-2692. doi: 10.1245/s10434-018-6567-6. Epub 2018 Jun 26. PMID: 29946997; PMCID: PMC6097725.
16. Menahem B, Alves A, Regimbeau JM, Sabbagh C. Lynch Syndrome: Current management In 2019.J Visc Surg. 2019 Dec;156(6):507-514. doi: 10.1016/j.jviscsurg.2019.07.009.
17. Miao K, Yu S, Ni J, Zhang X, Zhang L. Second primary tumor after immune checkpoint inhibitor therapy: A case report. Thorac Cancer. 2022 Apr;13(7):1076-1078. doi: 10.1111/1759-7714.14327. Epub 2022 Feb 11. PMID: 35150077; PMCID: PMC8977149.
18. Steinemann DC, Bueter M, Schiesser M, Amygdalos I, Clavien PA, Nocito A.Management of anastomotic ulcers after Roux-en-Y gastric bypass: results of an international survey. Obes Surg. 2014 May;24(5):741-6. doi: 10.1007/s11695-013-1152-3.
19. Tanjak P, Suktitipat B, Vorasan N, Juengwiwattanakitti P, Thiengtrong B, Songjang C, Therasakvichya S, Laiteerapong S, Chinswangwatanakul V. Risks and cancer associations of metachronous and synchronous multiple primary cancers: a 25-year retrospective study. BMC Cancer. 2021 Sep 23;21(1):1045. doi: 10.1186/s12885-021-08766-9.
20. Warren S, Gates O. Multiple primary malignant tumors, a survey of the literature and statistical study. Am J Cancer. 1932;16:1358-1414.
21. Yang XB, Zhang LH, Xue JN, Wang YC, Yang X, Zhang N, Liu D, Wang YY, Xun ZY, Li YR, Sun HS, Zhao LJ, Zhao HT. High incidence combination of multiple primary malignant tumors of the digestive system. World J Gastroenterol. 2022 Nov 7;28(41):5982-5992. doi: 10.3748/wjg.v28.i41.5982.
22. Ying X, Zhang H, Chen B, Wu H, Bao L, Qian S, Ying X. Multiple metachronous rare primary malignant tumors: A case report. Thorac Cancer. 2019 Oct;10(10):2050-2053. doi: 10.1111/1759-7714.13182. Epub 2019 Aug 27. PMID: 31454854; PMCID: PMC6775015.
23. Zhai C, Cai Y, Lou F, Liu Z, Xie J, Zhou X, Wang Z, Fang Y, Pan H, Han W. Multiple Primary Malignant Tumors - A Clinical Analysis of 15,321 Patients with Malignancies at a Single Center in China. J Cancer. 2018 Jul 16;9(16):2795-2801. doi: 10.7150/jca.25482. PMID: 30123347; PMCID: PMC6096360.
24. Zhan X, He L, Song K, Cao S, Meng E, Wang Y. Case Report: Triple Primary Malignant Tumors of the Esophagus, Stomach, and Colon in a Patient With Genetic Analysis. Front Genet. 2021 Jul 9;12:676497. doi: 10.3389/fgene.2021.676497. PMID: 34306021; PMCID: PMC8299121.
25. Zhang Z, Liu F, Qu Y, Qiu L, Zhang L, Yang Q. Second primary malignancy among malignant solid tumor survivors aged 85 years and older. Sci Rep. 2021 Oct 5;11(1):19748. doi: 10.1038/s41598-021-99260-6. PMID: 34611235; PMCID: PMC8492691.
26. Zhu CL, Peng LZ. Clinical analysis of multiple primary gastrointestinal malignant tumors: A 10-year case review of a single-center. World J Gastrointest Oncol. 2024 Apr 15;16(4):1204-1212. doi: 10.4251/wjgo.v16.i4.1204.

Випадок метахронного раку висхідної кишки та синхронного первинного раку прямої і дванадцятипалої кишки у хворого із синдромом Лінча

Я. М. Сусак [1], І. М. Лещишин [1], О. М. Лобанова [2]

[1] Національний медичний університет імені О. О. Богомольця, Київ

[2] Київська міська клінічна лікарня швидкої медичної допомоги

Множинні первинні злоякісні пухлини (МПЗП) — це дві або більше первинні злоякісні пухлини, які одночасно або послідовно виникли в одного пацієнта. Можуть походити з одного органа, парних органів, різних частин тієї самої системи або з різних органів. Синхронні МПЗП виникають протягом 6 міс після першої пухлини, метахронні — пізніше 6 міс. Відомостей про метахронний або синхронний колоректальний рак і рак дванадцятипалої кишки (ДПК) у доступних джерелах не знайдено.

Мета — представити результати лікування рідкісного випадку метахронного раку висхідної кишки й синхронного первинного раку прямої та дванадцятипалої кишки у хворого із синдромом Лінча.

Описано рідкісний випадок синхронного раку прямої та ДПК з позитивними результатами лікування після двоетапного хірургічного втручання без традиційної ад'ювантної терапії. Пацієнт, чоловік, 1963 року народження, у 2002 р. переніс правобічну геміколектомію з приводу муцинозної аденокарциноми висхідного відділу товстої кишки III стадії ($pT_{4p}N_1M_0$). Улітку 2022 р. у нього з'явилися скарги на біль у правому підребер'ї, нудоту, загальну слабкість і домішки крові в калі. Обстеження виявило синхронний первинний рак ректосигмоїдного відділу та рак ДПК. Через часткову низьку кишкову непрохідність ухвалено рішення про двоетапне оперативне втручання. Перший етап (08.09.2022): передня резекція прямої кишки з накладанням сигморектоанастомозу ($pT_{4c}N_{2b}M_0$, III стадія, R-0). За результатами імуногістохімічного скринінгу та генетичних досліджень у пацієнта діагностовано синдром Лінча. Другий етап (08.12.2022): резекція частини нисхідного та нижньо-горизонтального відділу ДПК із дуодено-дуоденоанастомозом, гастроєюностомія за методом Ру, наскрізне прошивання шлунка в препілоричному відділі, холецистектомія, дренування черевної порожнини (аденокарцинома ДПК, краї вільні: R-0). Під час контрольної комп'ютерної томографії через 1,9 міс після останньої операції ознак prolongatio morbi немає. Спостереження за пацієнтом триває.

Ключові слова: метахронний рак, синхронний первинний рак прямої та дванадцятипалої кишки, хірургічне лікування, синдром Лінча.

FOR CITATION

Susak YM, Leschyshyn IM, Lobanova OM. A case of metachronous ascending colon cancer and synchronous primary rectal and duodenal cancer in a patient with Lynch syndrome. General Surgery (Ukraine). 2024;(4);68-75. http://doi.org/10.30978/GS-2024-4-68.