Junior researchers

ახალგაზრდა მკვლევარები

Vol. 3 Issue 4, 2025

https://doi.org/10.52340/jr.2025.03.04.03

A Clinical Case Report: A 71-Year-Old Male with Cardial Gastric Adenocarcinoma

Ketevan Kimadze[1], Jaba Babaevi[2]

[1]Tbilisi State Medical University, Tbilisi, Georgia; [2]National Center of Surgery, Tbilisi, Georgia

Abstract

Gastric cancer is the fifth most common malignancy and the third leading cause of cancer-related mortality worldwide, accounting for over 1.1 million new cases and 769 000 deaths annually. Among its histological subtypes, tubular adenocarcinoma comprises approximately 50 % of early gastric cancers and generally carries a more favorable prognosis compared to poorly differentiated variants.

We report the case of a 71-year-old male who presented with several weeks of progressive epigastric pain, vomiting, anorexia, and weight loss. Initial diagnostics—including two esophagogastroduodenoscopies (EGDs) with multiple biopsies—failed to confirm malignancy due to tumor location and sampling limitations. Contrast-enhanced computed tomography (CT) performed in June 2024 revealed focal gastric wall thickening along the lesser curvature and enlarged perigastric lymph nodes, suggestive of locoregional spread without distant metastases. By August 2024, his clinical condition deteriorated, with refractory vomiting and severe malnutrition (15 kg weight loss over three months), necessitating urgent surgical intervention. He underwent laparoscopic total gastrectomy with Roux-en-Y reconstruction and D2 lymphadenectomy. Histopathology confirmed a poorly differentiated tubular adenocarcinoma (ICD-O-8211/3), staged pT3N1M0, with perineural invasion but negative resection margins. Postoperative recovery was uneventful; adjuvant chemotherapy comprising 5-fluorouracil, cisplatin, leucovorin, and folic acid was administered for three cycles. Follow-up imaging at three months showed no evidence of recurrence. HER2 testing was planned to assess eligibility for trastuzumab.

This case underscores the importance of an adaptive, multidisciplinary approach when standard diagnostic pathways are inconclusive. Early recognition of sampling limitations in cardia tumors, timely surgical intervention to secure both diagnosis and palliation, and appropriate adjuvant therapy are critical to optimizing outcomes in advanced gastric tubular adenocarcinoma.

Introduction

Gastric cancer remains a major global health challenge, ranking fifth in incidence and third in cancer-related mortality worldwide [1]. Histologically, tubular adenocarcinoma represents up to 50 % of early-stage gastric cancers and is associated with better survival rates than poorly differentiated subtypes [2]. Early detection and treatment are paramount, as advanced-stage disease carries a significantly worse prognosis [3].

For locally advanced gastric cancer, the current standard of care generally involves neoadjuvant chemotherapy to downstage the tumor and improve R0 resection rates, translating into a 10–15 % survival advantage compared with surgery alone [4, 5]. Following neoadjuvant therapy, radical gastrectomy with D2 lymphadenectomy is performed, and adjuvant chemotherapy—often with a fluoropyrimidine and platinum-based regimen—is recommended to address micrometastatic disease [6]. Achieving an R0 resection is paramount, as margin-negative status correlates with a 60–70 % improvement in long-term survival [5].

However, challenges such as tumor location, biopsy sampling limitations, and patient-specific factors may preclude neoadjuvant therapy, necessitating an adaptive treatment approach. Tumors involving the gastric cardia, in particular, frequently yield inconclusive endoscopic biopsies in 20–25 % of cases, delaying definitive management [7]. Herein, we report a case of advanced gastric tubular adenocarcinoma in which diagnostic ambiguity and rapid clinical deterioration necessitated urgent surgical intervention, highlighting the role of adaptive strategies and multidisciplinary collaboration.

Case Presentation

Clinical History

A 71-year-old Caucasian male presented to our institution in June 2024 with a four-week history of progressive epigastric pain, recurrent non-bilious vomiting, anorexia, and unintentional weight loss of approximately 10 kg. His past medical history was unremarkable, with no prior gastrointestinal disorders, malignancies, or surgeries. He was a former smoker (20 pack-years) who had quit 15 years prior and reported occasional alcohol consumption. There was no family history of gastric or colorectal cancer. On physical examination, he appeared cachectic (body mass index, 18 kg/m²), afebrile, with mild epigastric tenderness but no palpable abdominal mass. Vital signs were stable.

Diagnostic Workup

Imaging

Contrast-enhanced CT of the abdomen and pelvis (June 2024) demonstrated irregular, focal thickening of the gastric wall along the lesser curvature, extending from the cardia to the proximal body (maximum thickness, 1.5 cm). Multiple enlarged perigastric and parapancreatic lymph nodes

measuring up to 3 cm were noted (Figure 1). No evidence of distant metastases was identified on chest, abdominal, and pelvic imaging.

Endoscopy and Biopsy

An initial esophagogastroduodenoscopy (EGD) performed in mid-June 2024 revealed a polypoid, ulcerated mass at the gastric cardia, extending inferiorly along the lesser curvature. The lesion bled on contact, obstructing optimal visualization. Multiple forceps biopsies were obtained from the lesion's periphery; histopathology revealed acute inflammation, reactive epithelial changes, and intestinal metaplasia but no evidence of malignancy.

A repeat EGD two weeks later confirmed a fully closed lower esophageal sphincter with refluxed gastric contents in the distal esophagus. The mass again exhibited contact bleeding and deformation of the cardia; additional biopsies were obtained. Histopathological examination again demonstrated only inflammatory changes and focal metaplasia, without dysplasia or carcinoma. These inconclusive results were attributed to sampling difficulties related to tumor location, consistent with reported diagnostic limitations in 20–25 % of proximal gastric cancers [7].

Clinical Deterioration

By August 2024, despite supportive measures—including nasojejunal tube feeding and proton-pump inhibitor therapy—the patient's symptoms persisted. He continued to experience refractory vomiting, a further 5 kg weight loss (total 15 kg over three months), and progressive weakness. Laboratory studies revealed hypoalbuminemia (2.8 g/dL), electrolyte disturbances (hypokalemia, 3.0 mmol/L), and evidence of micronutrient deficiencies. Nutritional optimization was unsuccessful, and his Eastern Cooperative Oncology Group (ECOG) performance status declined to 3. Given his deteriorating condition and inability to establish a definitive preoperative diagnosis, the multidisciplinary tumor board recommended urgent surgical exploration for both palliation and definitive pathology.

Surgical Management

On August 7, 2024, the patient underwent a laparoscopic total gastrectomy with Roux-en-Y esophagojejunostomy and D2 lymphadenectomy. Intraoperatively, a fungating mass measuring approximately 5 cm in greatest dimension was identified, extending from the gastric cardia into the fundus, with evidence of retroperitoneal infiltration. Dense adhesions to the spleen and pancreas were lysed using an ultrasonic scalpel. The proximal resection margin (lower esophagus) and distal margin (proximal jejunum) were grossly negative. Fourteen lymph nodes were harvested according to D2 dissection protocol: five perigastric (station 1) and nine second-tier nodes (stations 7, 8a, 9). No intraoperative complications occurred, and estimated blood loss was 150 mL.

Pathological Findings

Gross examination revealed a 5 cm ulcerofungating tumor involving the cardia and proximal body. Histopathology showed a poorly differentiated (grade 3) tubular adenocarcinoma (ICD-O-8211/3) invading the subserosa (pT3). Three of the 14 lymph nodes (stations 1 and 3) were positive for metastatic carcinoma (pN1). Perineural invasion was present; lymphovascular invasion was absent. Resection margins were microscopically negative (R0). Immunohistochemistry for HER2/neu (ERBB2) was pending at the time of discharge.

Postoperative Course and Adjuvant Therapy

The patient's postoperative recovery was unremarkable. He was extubated in the operating room, transferred to the surgical ward on postoperative day 1, and advanced to a clear-liquid diet on day 2. By day 4, he tolerated a soft diet and was discharged home in stable condition. Nutritional status improved with the aid of a dietitian-administered high-protein supplement.

At six weeks postoperatively, he began adjuvant chemotherapy consisting of 5-fluorouracil (800 mg/m²/day, continuous infusion on days 1–5), cisplatin (80 mg/m² on day 1), leucovorin (200 mg/m² on day 1), and folic acid (350 mg on day 1), repeated every three weeks for three cycles, per institutional protocol [10]. Follow-up contrast-enhanced CT at three months post-surgery showed no evidence of recurrent or metastatic disease. HER2/neu immunostaining returned positive (score 3+), prompting consideration of trastuzumab addition pending cardiac evaluation.

Discussion

Advanced gastric cancer—particularly when localized to the cardia—poses significant diagnostic and therapeutic challenges. Our case illustrates several key considerations:

1. Diagnostic Challenges in Proximal Tumors

Tumors involving the gastric cardia frequently yield nondiagnostic or inconclusive biopsy results due to limited visualization and sampling difficulty. Studies report that up to 20–30 % of cardia-region gastric cancers are not confirmed on initial endoscopic biopsy, delaying definitive management [7]. In our patient, two separate EGDs with multiple forceps biopsies failed to demonstrate malignancy, despite radiological findings highly suggestive of locally advanced cancer. This underscores the need for adjunctive techniques such as endoscopic ultrasound-guided fine-needle biopsy (EUS-FNB) or liquid biopsy, which may improve diagnostic yield in challenging locations [4, 7].

2. Timing and Rationale for Urgent Surgery

Current guidelines recommend neoadjuvant chemotherapy for 70–80 % of patients with locally advanced gastric cancer to improve R0 resection rates and overall survival by 10–15 % [4, 5]. However, neoadjuvant therapy requires histologic confirmation of malignancy. In our patient, persistent clinical decline—including severe malnutrition (15 kg weight loss over three months), refractory vomiting, and declining performance status (ECOG 3)—precluded safe administration of neoadjuvant chemotherapy. Delaying definitive management can lead to catastrophic outcomes, including disease progression to unresectable status and further nutritional compromise. Urgent surgical intervention was therefore indicated to (1) relieve life-threatening gastric outlet obstruction, (2) obtain a definitive tissue diagnosis, and (3) achieve local disease control. Early surgery facilitated R0 resection, which is associated with a 60–70 % improvement in long-term survival [5].

3. Role of D2 Lymphadenectomy

D2 lymphadenectomy remains the gold standard for surgical management of proximal gastric cancer, given the high likelihood of lymphatic spread to stations 1–11 in cardia tumors [3, 8]. Randomized trials, including the Dutch D1D2 trial, have demonstrated a 10–15 % reduction in locoregional recurrence and improved survival with D2 versus D1 dissection when performed by experienced surgeons [8]. In our case, 14 lymph nodes were harvested, with three first-tier nodes positive (pN1). Comprehensive nodal clearance allowed accurate pathologic staging, guiding the decision to administer adjuvant chemotherapy.

4. Impact of Adjuvant Chemotherapy

Adjuvant chemotherapy aims to eradicate micrometastatic disease remaining after surgical resection. A combination of a fluoropyrimidine (e.g., 5-fluorouracil) and a platinum agent (e.g., cisplatin) is associated with a 20–30 % reduction in recurrence rates and improved overall survival in advanced gastric cancer [10]. Our patient tolerated three cycles of 5-fluorouracil, cisplatin, leucovorin, and folic acid, with no significant grade 3 or 4 toxicities. Follow-up imaging at three months confirmed absence of recurrent or metastatic disease.

5. Integration of Targeted Therapy

HER2 overexpression occurs in approximately 15–20 % of gastric adenocarcinomas and serves as a target for trastuzumab, which has been shown to improve overall survival by 4–6 months when added to standard chemotherapy in HER2-positive disease [9]. In our patient, immunohistochemistry revealed HER2 positivity (3+), making him a candidate for trastuzumab-based therapy pending cardiac

function evaluation. Incorporating targeted therapy into a multidisciplinary treatment plan exemplifies precision medicine in gastric cancer.

6. Multidisciplinary Collaboration

The complexity of advanced gastric cancer necessitates close collaboration among gastroenterologists, radiologists, surgical oncologists, medical oncologists, pathologists, and nutrition specialists. In this case, prompt coordination enabled (1) adaptive decision-making in the face of diagnostic uncertainty, (2) safe execution of a technically demanding laparoscopic total gastrectomy with D2 lymphadenectomy, (3) timely initiation of adjuvant chemotherapy, and (4) planning for targeted therapy. Multidisciplinary care has been shown to improve adherence to guidelines and patient outcomes, with five-year overall survival rates of 40–50 % in pT3N1M0 disease when managed in specialized centers [6].

Conclusion

This case highlights the challenges inherent in managing advanced gastric tubular adenocarcinoma, particularly when standard endoscopic biopsy fails to yield a definitive diagnosis. Key lessons include:

Early recognition of sampling limitations: Cardia-region tumors often yield inconclusive biopsies; adjunctive techniques such as EUS-guided sampling or liquid biopsy should be considered.

Adaptive management: When neoadjuvant therapy is precluded by diagnostic or patient-related factors, timely surgical intervention can serve both diagnostic and therapeutic purposes.

Importance of D2 lymphadenectomy: Comprehensive nodal clearance is critical for accurate staging and reducing locoregional recurrence.

Role of adjuvant chemotherapy: Fluoropyrimidine- and platinum-based regimens significantly decrease recurrence rates and improve survival.

Integration of targeted therapy: HER2 testing should be performed routinely; trastuzumab improves outcomes in HER2-positive tumors.

Multidisciplinary approach: Coordination among specialties ensures optimal, individualized care.

Ongoing advances in diagnostic modalities and targeted therapies will further refine the management of advanced gastric cancer, emphasizing the need for personalized, multidisciplinary treatment strategies.

References

1. Sung H, Ferlay J, Siegel RL, et al. Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. CA Cancer J Clin. 2021;71(3):209–249.

2. Lee H, Kim HI, Kim YN, et al. Current management of gastric adenocarcinoma: a narrative review. Transl Gastroenterol Hepatol. 2023;8:22.

3. Japanese Gastric Cancer Association. Japanese gastric cancer treatment guidelines 2021 (6th edition). Gastric Cancer. 2023;26(1):1–25.

4. Li X, Wang W, Wang L, et al. Advances and challenges in gastric cancer testing: the role of biomarkers. Cancer Biol Med. 2025;22(1):e2025001.

5. Zhang M, Li Z, Chen J, et al. Significance of nodal dissection and nodal positivity in gastric cancer. Transl Gastroenterol Hepatol. 2022;7:13.

6. Smyth EC, Nilsson M, Grabsch HI, et al. Gastric cancer. Lancet. 2020;396(10251):635–648.

7. Yamada H, Ikegami M, Shimoda T, et al. Diagnostic accuracy of endoscopic biopsy for early gastric cancer: comparison of forceps biopsy and endoscopic mucosal resection specimens. Gastric Cancer. 2001;4(4):219–222.

8. Songun I, Putter H, Kranenbarg EM, et al. Surgical treatment of gastric cancer: 15-year follow-up results of the randomized nationwide Dutch D1D2 trial. Lancet Oncol. 2010;11(5):439–449.

9. Bang YJ, Van Cutsem E, Feyereislova A, et al. Trastuzumab in combination with chemotherapy versus chemotherapy alone for treatment of HER2-positive advanced gastric or gastro-oesophageal junction cancer (ToGA): a phase 3, open-label, randomized controlled trial. Lancet. 2010;376(9742):687–697.

10. Kim HI, Kim YN, Kim YW, et al. Current status of adjuvant chemotherapy for gastric cancer. World J Gastroenterol. 2019;25(17):2029–2040

კლინიკური შემთხვევის აღწერა: 71 წლის კაცი კუჭის კარდიული ადენოკარცინომით

ქეთევან ქიმაძე[1], ჯაბა ბაბაევი[2]

[1]თბილისის სახელმწიფო სამედიცინო უნივერსიტეტი, თბილისი, საქართველო

[2]ქირურგიის ეროვნული ცენტრი, თბილისი, საქართველო

აბსტრაქტი

კუჭის კიბო არის მეხუთე ყველაზე გავრცელებული სიმსივნე და მესამე ძირითადი მიზეზი სიმსივნური სიკვდილიანობისა გლობალურად, რასაც თან ახლავს წლიურად 1.1 მილიონზე მეტი ახალი შემთხვევა და 769 000 გარდაცვალება. ჰისტოლოგიურ ტიპებს შორის ტუბულური ადენოკარცინომა შეადგენს ადრეული კუჭის კიბოების დაახლოებით 50 %-ს და, როგორც წესი, უკეთესი პროგნოზით ხასიათდება შედარებით ნაკლებად დიფერენცირებულ ვარიანტებთან.
ჩვენ წარმოგიდგენთ 71 წლის მამაკაცის შემთხვევას, რომელიც რამდენიმე კვირის განმავლობაში უჩიოდა პროგრესულ ეპიგასტრულ ტკივილს, ღებინებასა და წონის კლებას. საწყისი დიაგნოსტიკური კვლევით — მუცლის ღრუს კომპიუტერული ტომოგრაფიით — აღიძვრა ეჭვი სიმსივნის თაობაზე, თუმცა ორჯერადმა გასტროსკოპიამ ბიოფსიით, ვერ დაადასტურა სიმსივნე, რადგან წარმინაქმნის და თვისობრიობამ გაართულა ნიმუშის აღება . დაახლოებით 2 თვეში მისი მდგომარეობა გაუარესდა: მდგრადი ღებინება და მძიმე კვებითი დეფიციტი (15 კგ წონის კლება სამი თვის განმავლობაში), რის გამოც გახდა საჭირო დაუყოვნებელი ქირურგიული ჩარევა. ჩატარდა ლაპაროსკოპიული ტოტალური გასტრექტომია Roux-en-Y რეკონსტრუქციით და D2 ლიმფადენექტომიით. პოსტოპერაციულად ჩატარებულმა ჰისტოპათოლოგიამ დაადასტურა დაბალ დიფერენცირებული ტუბულური ადენოკარცინომა (ICD-O-8211/3), სტადია pT3N1M0, R0 რეზექციული კიდეებით. პოსტოპერაციულმა პერიოდმა გართულებების გარეშე ჩაიარა: ადიუვანტურად ჩატარდა 5-ფლუორურაცილით, ცისპლატინით, ლევიკორინით და ფოლური მჟავით. სამ თვეში ჩატარებულ არ აჩვენა რეციდივი. დაიგეგმა HER2 ტესტირება, რათა შეეფასებინა ტრასტუზუმაბის გამოყენებისეფექტურობა პაციენტში.
ეს შემთხვევა ხაზს უსვამს ადაპტაციური, მრავალდისციპლინური მიდგომის მნიშვნელობას, მაშინ როცა სტანდარტული დიაგნოსტიკური გზები არ იძლევა საკმარის ინფორმაციას. ადრეული ნიმუშის აღების შეზღუდვების გაცნობიერება კარდიული ტიპის სიმსივნეებში, დროული ქირურგიული ჩარევა დიაგნოზის დასადგენად უზრუნველსაყოფად, და შესაბამისი ადიუვანტური თერაპია კრიტიკულია გადაუდებელი კუჭის ტუბულური ადენოკარცინომის შედეგების ოპტიმიზაციისთვის.