

Mantle Cell Lymphoma Presenting with Severe Upper GI Bleeding.

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Abstract

Although it usually involves extra-nodal sites such as gastrointestinal tract in more than 80% of case, Mantle cell lymphoma is considered a rare cause of gastrointestinal bleeding, especially a severe and life-threatening bleeding.

We are reporting a 60 year old man, known to have peptic ulcer disease, who presented with a severe upper GI bleeding and found to have large gastric ulcer, which diagnosed as primary gastric mantle cell lymphoma.

Introduction

One of the mature B cell non-Hodgkin lymphomas (NHL) is mantle cell lymphoma (MCL). Although it is often discussed alongside clinically indolent types of NHL, its behavior is more often that of a disease that is aggressive¹. In the United States and Europe, MCL accounts for about 7% of adult non-Hodgkin lymphomas, with an annual occurrence of 4 to 8 cases per million people¹. MCL may affect any part of the digestive tract, with lymphomatous intestinal polyposis being an occasional presenting². The stomach (57 percent), duodenum (52 percent), jejunum/ileum (87 percent), colon (90 percent), and rectum (69 percent) were all included in a prospective clinicopathologic review of 31 cases of gastrointestinal tract involvement³.

Patients with gastric lymphoma have nonspecific symptoms that are close to those seen in more common gastric conditions like peptic ulcer disease, gastric adenocarcinoma, and non-ulcer dyspepsia. Occult gastrointestinal bleeding constitutes around 19 percent of the presenting symptoms of all gastric lymphomas⁴.

We present a case of mantle cell lymphoma initially presenting with unusual massive upper gastrointestinal bleeding.

Case Presentation

A 60-year-old, Pakistani gentleman, previously healthy apart from history of peptic ulcer disease which was diagnosed four months prior to the admission in his home country by endoscopy and treated medically with antibiotics as per the patient. He presented to our hospital with a few days' history of recurrent episodes of black tarry stool, with mild nausea and heartburn, but no vomiting or frank abdominal pain. The patient denied any history of consuming alcohol, painkillers, or herbals.

On admission, blood pressure was 115/67 mmHg and heart rate 115 beats per minute. Physical examination otherwise was unremarkable. Initial blood test showed Hb 6.6 g/dl (Table 1). He was admitted under short stay and taken to Esophagogastroduodenoscopy (EGD). EGD showed Large Rolled Edges Greater Curvature ulcer with eccentric blood vessel (Fig. 1). Endoclip was deployed but the vessel

started oozing heavily after that. the patient was shifted to intensive care unit for stabilization and monitoring.

Table 1

laboratory tests upon admission.

Detail	Value w/Units	Normal Range
Beta 2 Microglobulin	2.21 mg/L	0.80-2.20
WBC	10.2 x10 ³ /uL	4.0-10.0
Hgb	6.3 gm/dL	13.0-17.0
MCV	87.0 fL	83.0-101.0
Platelet	233 x10 ³ /uL	150-400
INR	1.1	
APTT	21.9 seconds	24.6-31.2
Urea	17.0 mmol/L	2.5-7.8
Creatinine	68 umol/L	62-106
ALT	13 U/L	0-41
Retic #	144.8 x10 ³ /uL	50.0-100.0
Retic %	6.2 %	0.5-2.5

Interventional radiology team was contacted for embolization. There was no contrast extravasation during CT angio by interventional radiology, so no embolization done. CT abdomen with contrast showed features of gastric carcinoma with cervical peri gastric and possibly left paraaortic metastatic lymph nodes and suspected transverse mesocolon peritoneal nodules. During hospitalization, the patient developed multiple episodes of symptomatic anemia and melena.

He was treated conservatively by blood transfusion and started on Traneximic acid for 3 days. Biopsy revealed Mantel cell lymphoma. Therefore, the patient underwent urgent hemostatic Radiotherapy.

Histopathology

Sections from the gastric biopsy (Fig. 2) show expansion of the lamina propria with sheets of small monotonous lymphocytes with small nuclei and perinuclear clearing artifact.

No large cells or lymphoepithelial lesions identified. There are adjacent areas of ulceration and intestinal metaplasia (not shown).

By immunohistochemical stains, the neoplastic cells are of B-cell nature which stained positive with CD20 (Fig. 3), and co-express CD5 (Fig. 4), cyclin-D1 (Fig. 5) and SOX-11 (not shown). They are also positive for BCL2. The proliferation marker Ki-67 is positive in 20% of cells (not shown). The neoplastic cells are negative for CD10 and CD23 (not shown). The non-neoplastic T cells are highlighted with CD3 (not shown). The morphologic and immuno-phenotypical features are consistent with mantle cell lymphoma.

Discussion

At the time of diagnosis, the majority of MCL patients are in an advanced stage of the disease (70 percent). While lymphadenopathy is the primary symptom in around 75% of patients, extranodal disease is the primary clinical manifestation in the remaining 25%⁵. The lymph nodes, spleen (45 to 60 percent), Waldeyer's ring, bone marrow (> 60 percent), blood (13 to 77 percent), and extranodal sites like the gastrointestinal tract, breast, pleura, and orbit are all common sites of involvement⁵⁶. The explanation for mantle cell lymphoma's affinity for the gastrointestinal tract is unknown⁶.

Patients with mantle cell lymphoma that has spread to the gastrointestinal tract may be asymptomatic, or experience a variety of symptoms, including abdominal pain, obstruction, diarrhea, melena, and hematochezia. The ileocecal region is the most common site of gastrointestinal tract involvement, but any area from the stomach to the rectum could be affected. In a study published by Romaguera et al., up to 26% of patients had gastrointestinal symptoms at the time of diagnosis⁶.

Endoscopy can reveal MCL involvement in the gastrointestinal tract that is not visible on radiological imaging. During the staging process and during the follow-up period for MCL patients, endoscopic examinations are recommended⁷. Moreover, chemotherapy for primary gastrointestinal mantle lymphomas might result in potentially fatal gastrointestinal bleeding. Much attention should be paid to the prevention and treatment of PGIL gastrointestinal bleeding while receiving chemotherapy⁸.

Conclusions

MCL should be kept in mind when assessing massive upper GI bleeding, as an unusual cause of bleeding gastric ulcer. Also, predict the advancement of bleeding or onset of new bleeding after initiation of chemotherapy in patients with MCL.

Declarations

i. Funding:

Not applicable.

ii. Conflicts of interest/Competing interests:

The authors report no conflict of interest.

iii. Ethics approval:

Not applicable.

iv. Consent to participate:

Due to the COVID-19 situation and its impact on direct patient contact, only verbal consent was obtained to publish this case.

v. Consent for publication:

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vi. Availability of data and material (data transparency):

Not applicable.

vii. Code availability (software application or custom code):

Not applicable.

viii. Authors' contributions:

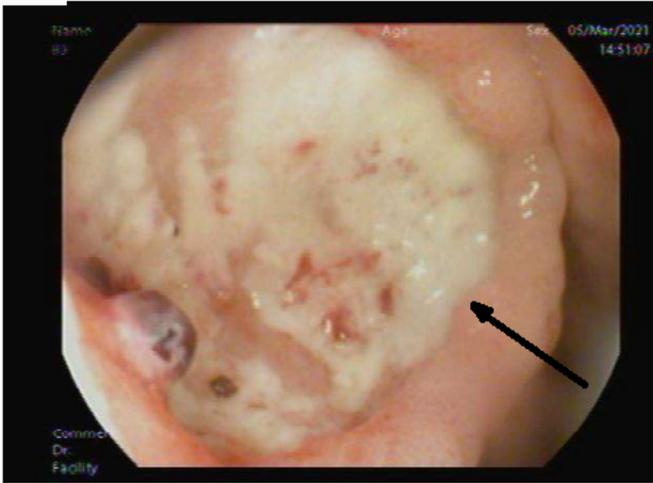
K.A. wrote the initial draft of the manuscript and literature review, M.B.H. participated in literature review and editing the manuscript, F.A. Description of pathological findings, M.A.Y. Editing and revising.

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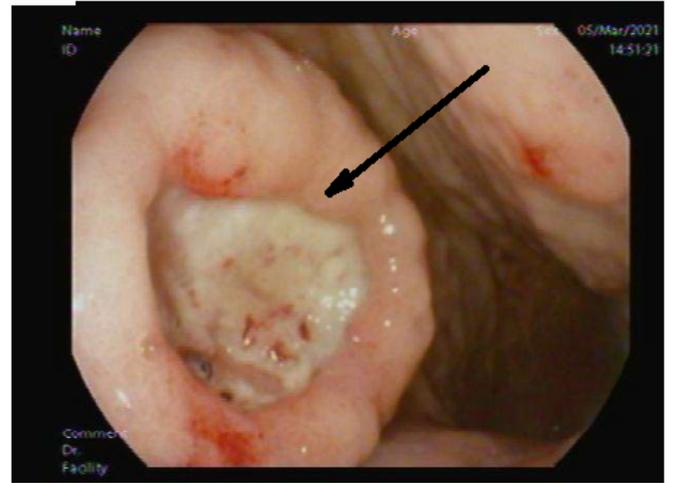
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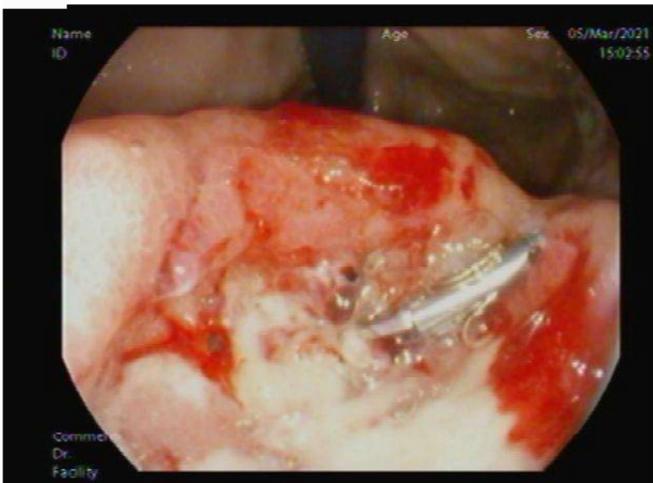
Figures



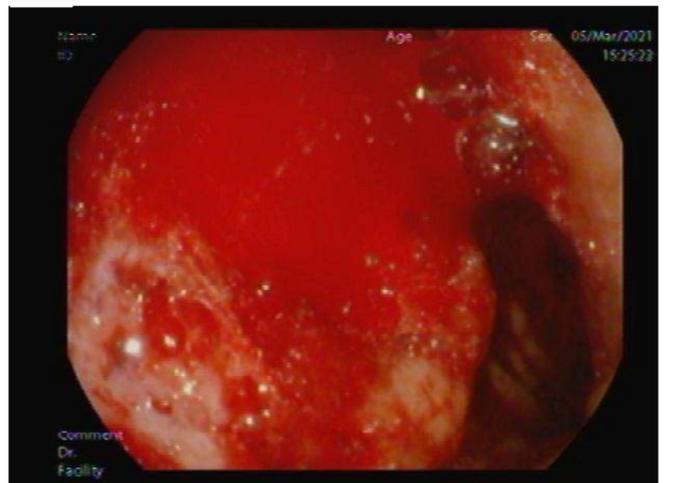
A



B



C



D

Figure 1

A, B: Large Rolled Edges Greater Curvature Ulcer. C, D: Bleeding during attempt to deploy Endoclip.

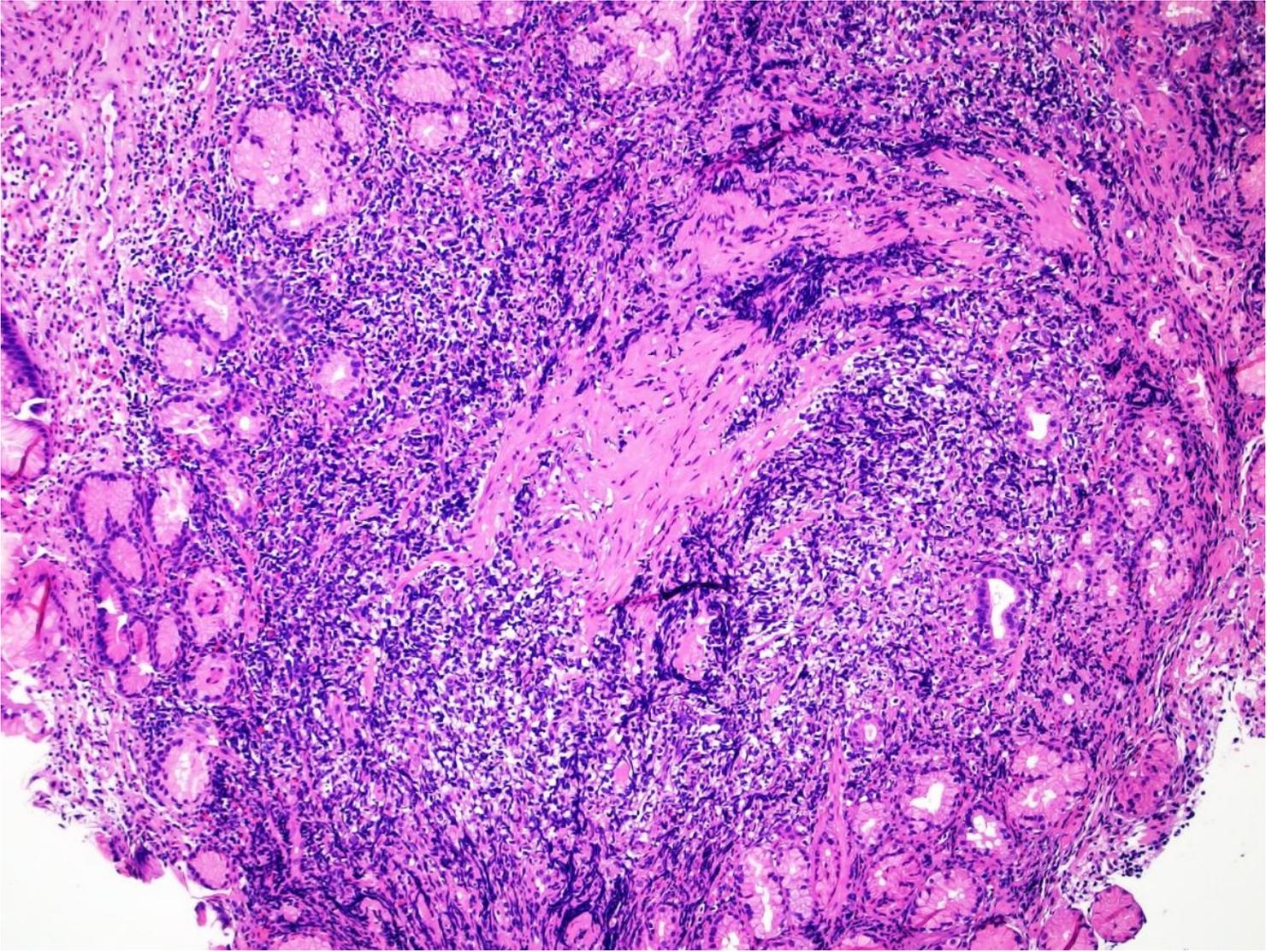


Figure 2

Low magnification H&E photo of the gastric biopsy. There is a dense lymphocytic infiltrate in the lamina propria

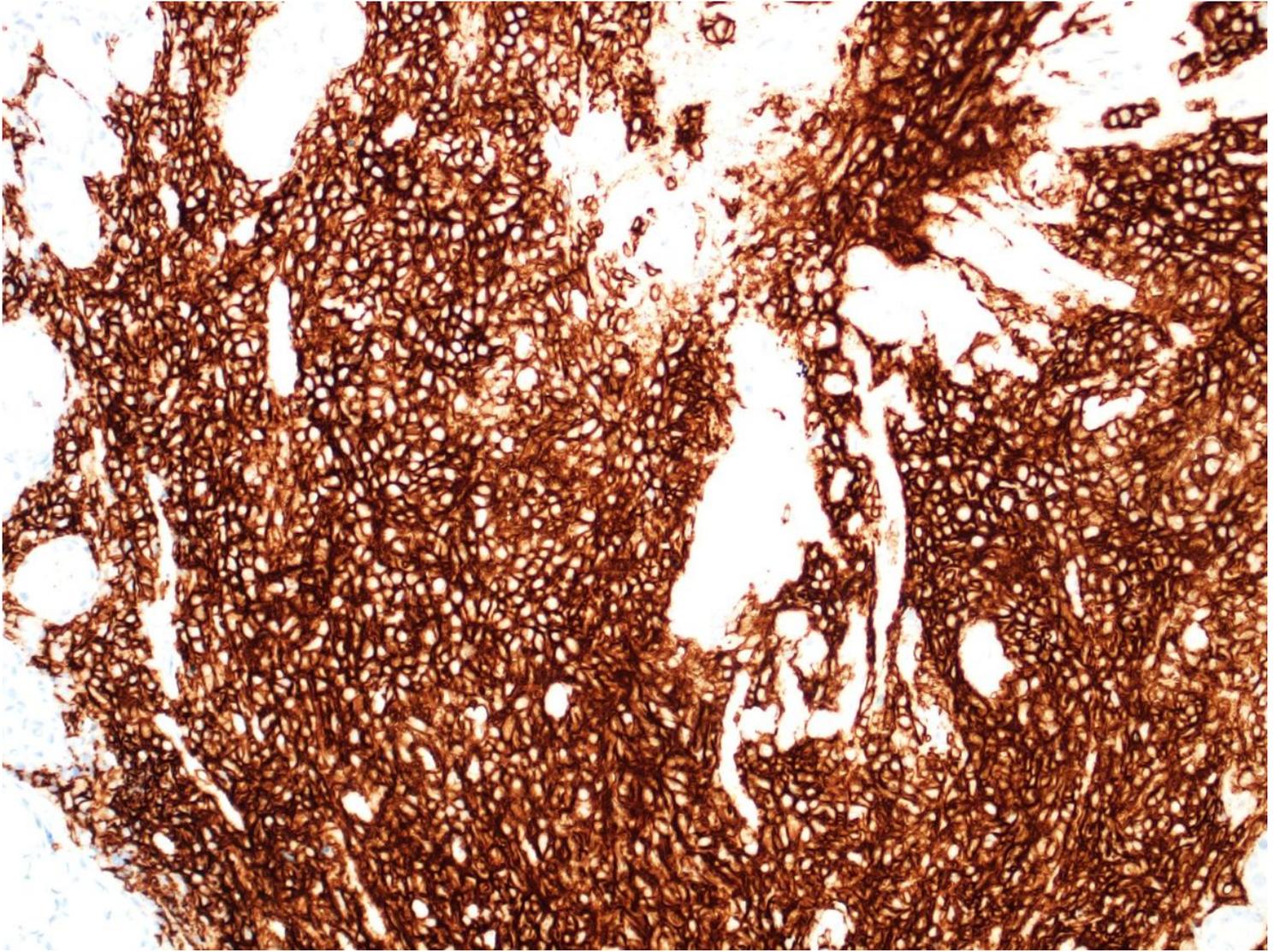


Figure 3

CD20 immunohistochemical stain is positive in the neoplastic lymphocytes, confirming the B cell nature.

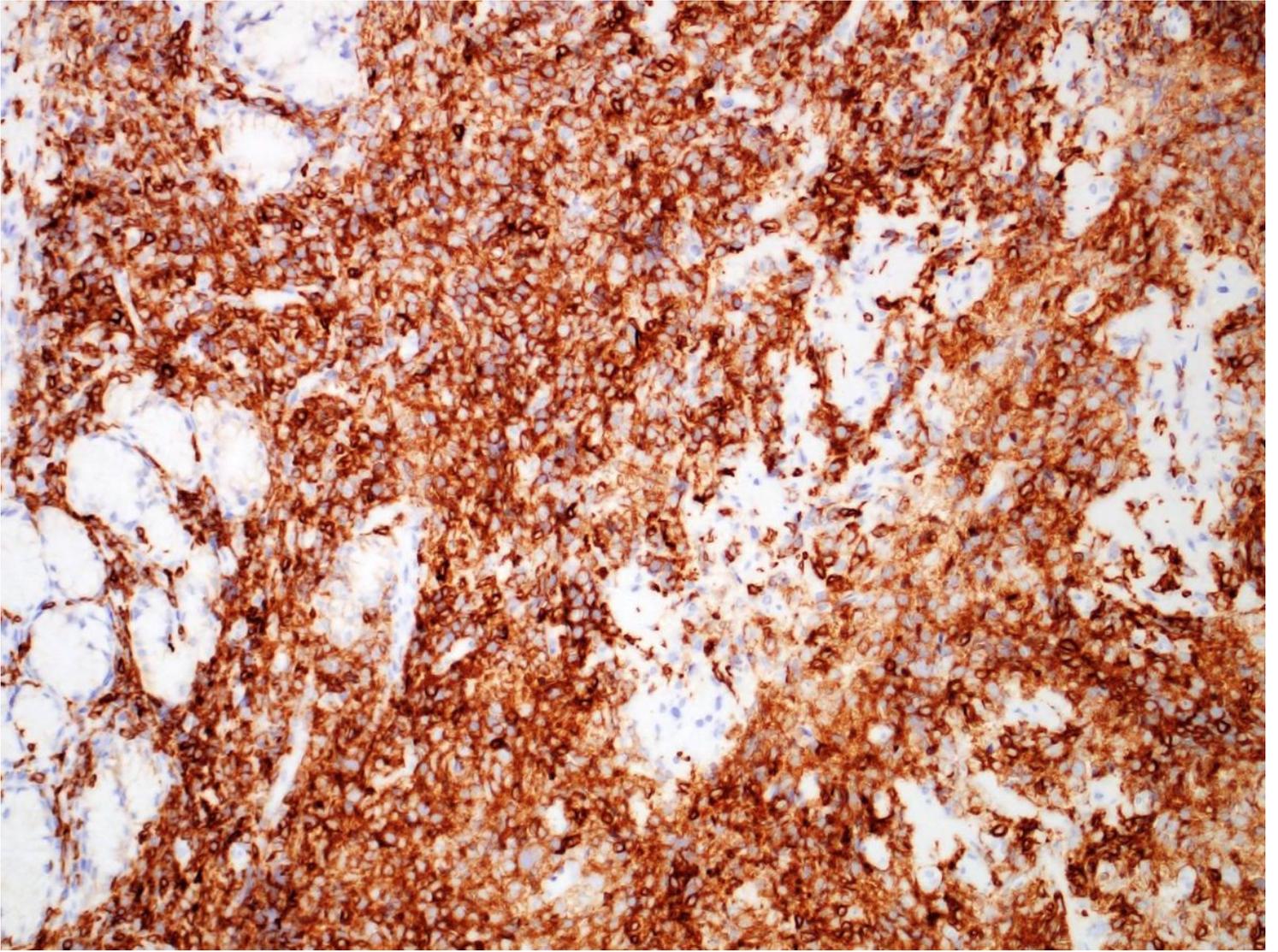


Figure 4

CD5 immunohistochemical stain is expressed in the non-neoplastic T cells in addition to the neoplastic B cells

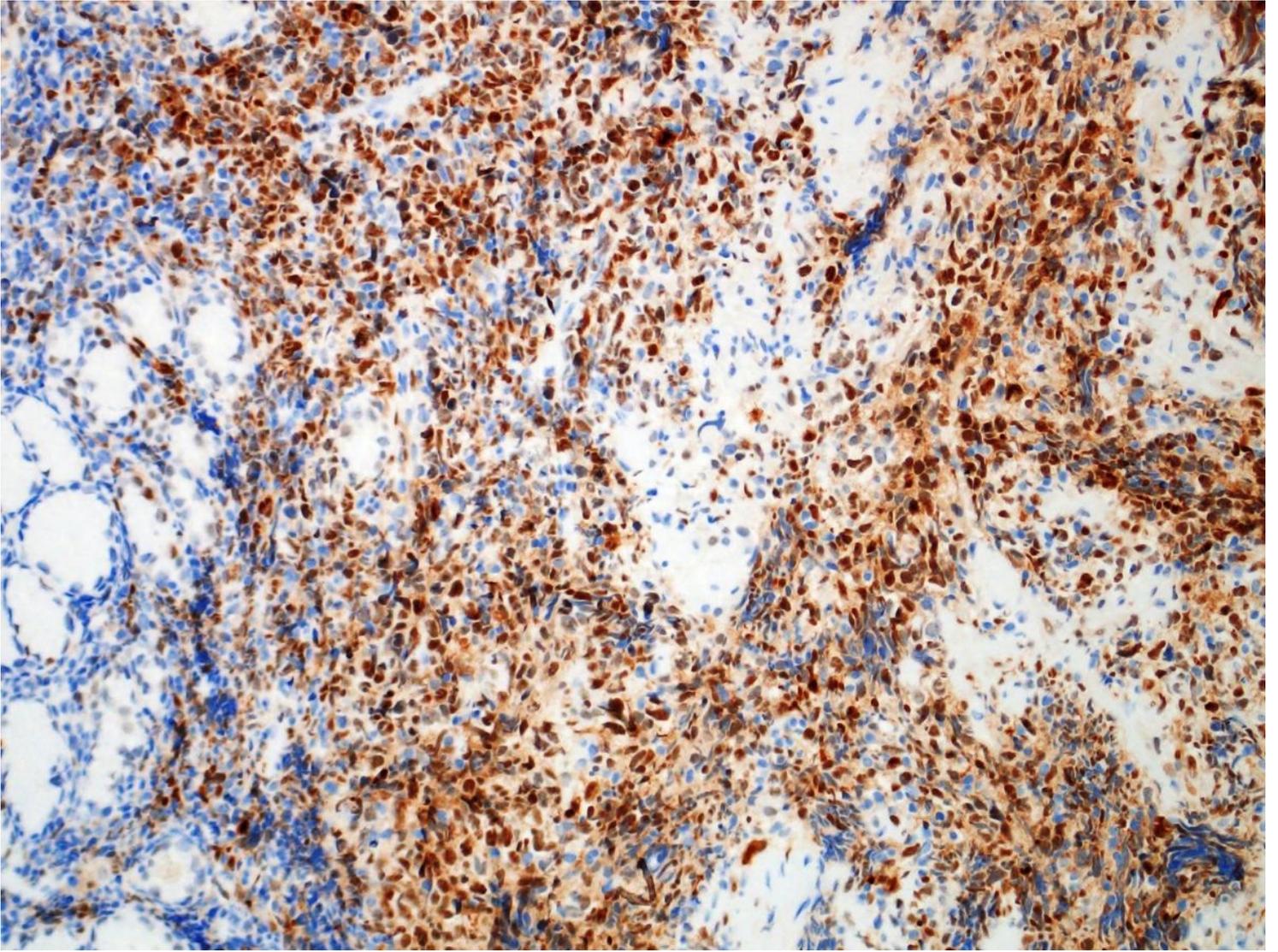


Figure 5

Cyclin-D1 immunohistochemical stain is expressed in the neoplastic B cells confirming the diagnosis of mantle cell lymphoma.