# Primary extrasensal nasal-type natural killer/T-cell lymphoma of the sigmoid colon and ıleocecal junction: A case report

*Chang Gao[#1,2], Jia-Long Liu[#1,2], Meng-Na Zhang[1,2], Pei-Shan Qiu[1,2], Xi-Xian Zhao[1,2], Qiu Zhao[1,2], Jing Liu[1,2], Xian-Yan Shi[1,2]*

[1]Department of Gastroenterology, Zhongnan Hospital of Wuhan University, Wuhan, China
[2]Hubei Clinical Center and Key Lab of Intestinal and Colorectal Diseases, Wuhan, China
[#]The first two authors contributed equally to this work.

***Cite this article as:*** *Gao C, Liu JL, Zhang MN, et al. Primary extrasensal nasal-type natural killer/T-cell lymphoma of the sigmoid colon and ıleocecal junction: A case report. Turk J Gastroenterol 2020; 31(12): 955-6.*

Dear Editor,

Extranodal natural killer/T-cell lymphoma (ENKTL) involving the intestinal tract is a rare disease. A total of 191 cases of ENKTL involving the gastrointestinal (GI) tract have been reported in the world literature, with a maximum age of onset of 79 years. Among them, 5 cases were involved in the sigmoid colon. Here, we reported the case of an 82-year-old ENKTL patient with sigmoid colon and ileocecal junction involvement, who had achieved a partial response after treatment with chidamide and prednisone.

The patient was an 82-year-old man with a history of cerebral infarction. In August 2019, he was admitted due to intermittent lower abdominal pain and diarrhea for 3 years. Three years ago, he developed lower abdominal pain without fever or gastrointestinal bleeding. Lower gastrointestinal endoscopy revealed ileocecal ulcer (Figure 1a) and colitis. Ileocecal biopsy suggested chronic inflammation with massive plasma cells infiltration (Figure 1b). Descending colon biopsy indicated chronic inflammation with ulceration and a small number of large cells in the granulation tissue that were suspected to be infected by the virus. Cerebral computed tomography (CT) scan showed no abnormality. He was diagnosed with colitis and showed limited improvement with Etiasa treatment. In 2018, the patient was again admitted to local hospital with abdominal pain. Repeat colonoscopy revealed ileocecal ulcer and the biopsy showed chronic inflammatory changes in mucosal tissue with mildly active lesions. One month before presentation, his abdominal pain worsened with diarrhea. The stool was accompanied by white gelatinous substances with occasional black stool. During this period, abdominal pain and diarrhea could be relieved by intermittent medication with etiasa, but the patient suffered from B symptoms, including itching of the skin and pain in the lower limbs. He lost 3 kg in 1 month.

On examination, the patient was found to have periumbilical and lower abdominal tenderness, without any other positive physical signs. Laboratory values were as follows: erythrocyte sedimentation rate: 50 mm/h, C-reactive protein: 115.6 mg/L, Autoimmunity antibody, tumor marker, HIV tests, and acid-fast staining of sputum were negative. Chest CT scan showed no abnormality. Vascular ultrasonography suggested arteriosclerosis of the lower extremities. CT virtual endoscopy showed abnormal thickening of the colon wall, especially the sigmoid colon wall and swelling of the mesangial vessels (Figure 2). Inflammatory lesions, such as ischemic bowel disease and infectious enteritis, should be considered. Colonoscopy revealed multiple ulcerative ulcerations in the large intestine (Figure 1c), indicating the diagnosis of lymphoma or intestinal tuberculosis. Ileocecal valve biopsy suggested ulceration with inflammatory granulation tissue hyperplasia. Sigmoid colon biopsy indicated ischemic enteritis with ulceration and lymphoid tissue hyperplasia with necrosis (Figure 1d). On immunohistochemical staining, these cells were found to be positive for CD3, CD56, and Epstein-Barr virus (EBV)-encoded small RNA (EBER), but negative for CD20. Ki-67 staining revealed a proliferative index of 70%. Based on neoplastic morphology and the immunohistochemical examination, pathological diagnosis was ENKTL (nasal type) with sigmoid colon and ileocecal junction involvement. Given the patient's age, no surgery was performed. The patient was treated with a chemotherapy regimen of chidamide and prednisone. At 3 months follow-up, he maintained a partial remission.

*Corresponding Author:* ***Jing Liu; liujing_GI@whu.edu.cn***
*Received:* ***October 23, 2019*** *Accepted:* ***April 15, 2020***

*DOI:* ***10.5152/tjg.2020.19873***

Extranodal natural killer/T-cell lymphoma (ENKTL) is defined as a distinctive clinicopathological disease with aggressive clinical manifestations, which is strongly associated with EBV infection (1). Tumor cell cytoplasm, marked with CD3, CD56, and EBER, meanwhile express T-cell-restricted intracellular antigen in pathology (2). It is more prevalent in East Asia and Latin America, but recent large retrospective studies conducted in Western countries have proven that the clinical features of ENKL are similar around the world (3). ENKTL is known as a localized disease involving the nasal cavity and other midline facial structures, but it also occurs in skin/ soft tissues and gastrointestinal tract. Some studies have shown that more advanced stages and worse treatment outcomes were associated with extranasal areas rather than nasal areas (1). Without treatment, the development of ENKTL is usually rapidly fatal, with a median survival time of only 7.8 months (4). Primary intestinal ENKTL is rare, accounting for 3.1% of all intestinal non-Hodgkin lymphoma cases (5). As a result, data on ENKTL involving GI tract is relatively scarce. Studies have shown that patients with GI tract involvement give priority to small intestine, followed by ileocecal junction, and common manifestations include abdominal pain, GI tract bleeding, bowel perforation, or B symptoms.

ENKTL involving the GI tract should be considered as a differential diagnosis of intestinal ulcers. The patient was misdiagnosed early with colitis and ileocecal ulcer because of no evidence of ENKTL. Based on our case and literature review, the reasons for difficulty in diagnosis include: (1) early clinical manifestations are atypical, (2) lack of attention to recurrent colonic and ileocecal ulcers, (3) immunohistochemistry was not performed as early as possible. Therefore, attention should be paid to endoscopic ulcerative changes in the elderly. Early pathological examination is useful for the diagnosis and prognosis of patients.

***Informed Consent:*** Written informed consent was obtained from the patient who participated in this study.

***Peer-review:*** Externally peer-reviewed.

***Author Contributions:*** Concept – L.J., G.C., L.J.L.; Design - G.C., L.J., S.X.Y.; Supervision - S.X.Y., L.J., Z.Q.; Resource - Z.M.N., Q.P.S., Z.X.X.; Materials - L.J., S.X.Y.; Data Collection and/or Processing - G.C., L.J.L.; Analysis and/or Interpretation - G.C., Z.M.N., Q.P.S.; Literature Search - L.J.L., Z.X.X.; Writing - G.C., L.J.L.; Critical Reviews - Z.Q., L.J., S.X.Y.

***Conflict of Interest:*** The authors have no conflicts of interest to declare.

***Financial Disclosure:*** Grant from National Natural Science Foundation of China (Jing Liu, Grant no. 81472735, no. 81101508), National Basic Research Program of China (973 program, J.L., Grant #2015CB932600), Wuhan City Health and Family Planning Commission (Jing Liu), Wuhan University (Jing Liu).

## *REFERENCES*

*1. Yamaguchi M, Suzuki R, Oguchi M. Advances in the treatment of extranodal NK/T-cell lymphoma, nasal type. Blood 2018; 131: 2528-40.*

*2. Yu BH, Shui RH, Sheng WQ, et al. Primary Intestinal Extranodal Natural Killer/T-Cell Lymphoma, Nasal Type: A Comprehensive Clinicopathological Analysis of 55 Cases. PloS One 2016; 11: e0161831.*

*3. Haverkos BM, Pan Z, Gru AA, et al. Extranodal NK/T Cell Lymphoma, Nasal Type (ENKTL-NT): An Update on Epidemiology, Clinical Presentation, and Natural History in North American and European Cases. Curr Hematol Malig Rep 2016; 11: 514-27.*

*4. Jaccard A, Hermine O. Extranodal natural killer/T-cell lymphoma: advances in the management. Curr Opin Oncol 2011; 23: 429-35.*

*5. Kim SJ, Choi CW, Mun YC, et al. Multicenter retrospective analysis of 581 patients with primary intestinal non-hodgkin lymphoma from the Consortium for Improving Survival of Lymphoma (CISL). BMC Cancer 2011; 11: 321.*