

# Natural Killer Cell 1

## Natural Killer (NK) Cell Lymphoma of the Cecum with Perforation —A case of report—

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Natural Killer cell lymphoma pursued a highly aggressive clinical course, with the aggressiveness and poor prognosis in this biologically distinct primary gastrointestinal lymphoma, a more vigorous systemic therapy should be considered in the addition to surgery. We report an unusual case of aggressive primary Natural Killer cell (lymphoma) of the cecum. A 38-year old man admitted of intractable fever, diarrhea, and hematochezia. He was diagnosed as primary NK cell cecal lymphoma with perforation after surgical resection. The primary lesion showed deep ulceration with perforation and it revealed metastasis to liver. The immunophenotype of the tumor cell was CD56+, CD3+, UCHL-1+, CD45RO+, polyclonal IGH, TCR $\beta$ , so confirmed NK cell type lymphoma. *J Korean Soc Coloproctol* 2001;17:277-282

**Key Words :** Natural Killer cell lymphoma, Cecum perforation, Poor prognosis, Natural killer cell

NK (Natural Killer) cell

<sup>3,4</sup>  
NK cell

가  
NK cell

NK cell

: 38

1) 1

: 6

5 40.0°C

, 5 6

가

2

1

, 가 :

:

150/90 mmHg,

100 ,

24 ,

39.5°C

B

T

<sup>1,2</sup>

162

( : 220-701)

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1999

6 15 kg 가  
 13,870/uL,  
 15.0 g/dL, 44.5%, 19 1,000/uL  
 Total Protein/Albumin  
 6.8/4.2 g/dL, AST/ALT 56/71 U/L,

(Tsutsugamushi, Leptospirosis, Korea Ab)  
 Ameoba  
 Clostridium difficile/toxin A, Widal test Ty-  
 phoid H 1 : 320, CMV IgM, HSV (Herpes  
 simplex) IgM, VZV (Varicella Zoster) IgM, ANA, B  
 HIV

CRP (C-Reactive protein) 15.88 mg/dL, ESR 14 mm/hr  
 prothrombin time 86.5%, aPTT  
 33.8/27.1 sec, amylase

Mycoplasma  
 (punctuate ulceration)

(skipped  
 area)  
 가

Sulfasalzine  
 (longitudinal ulcer) 가

2) 2

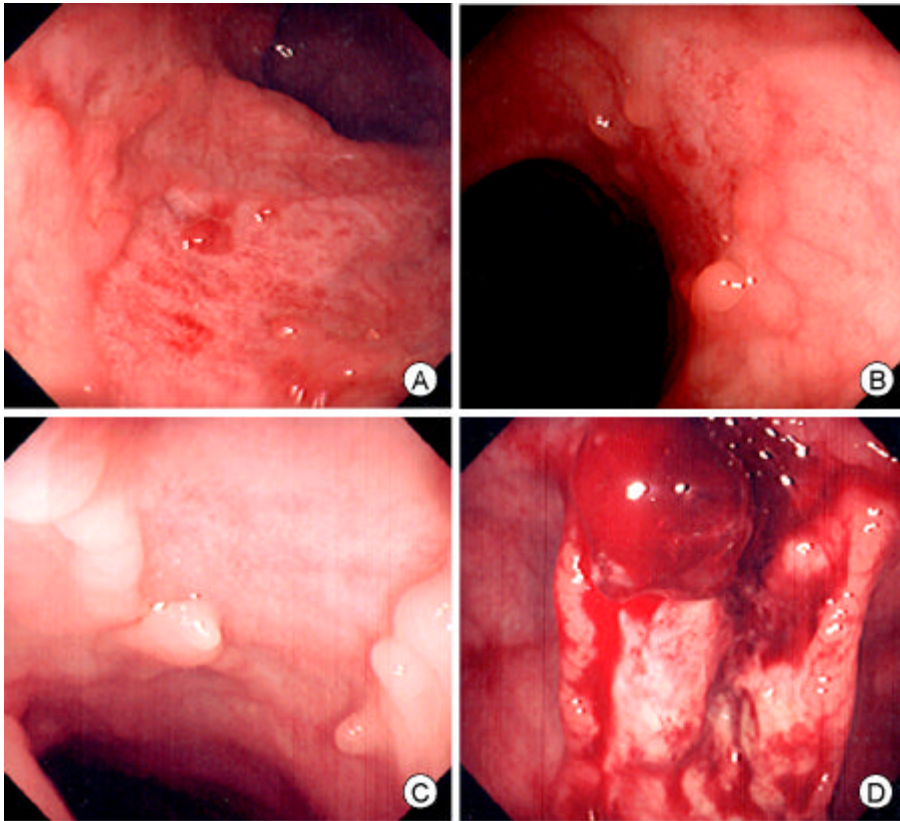
가  
 39.5°C  
 AST/ALT 176/145 U/L  
 , Total ADA/ADA 130.1/  
 , 2microglobulin가 4.2  
 mg/L 가  
 가

: 2  
 : 2 1  
 11  
 (hematochezia)  
 , 14

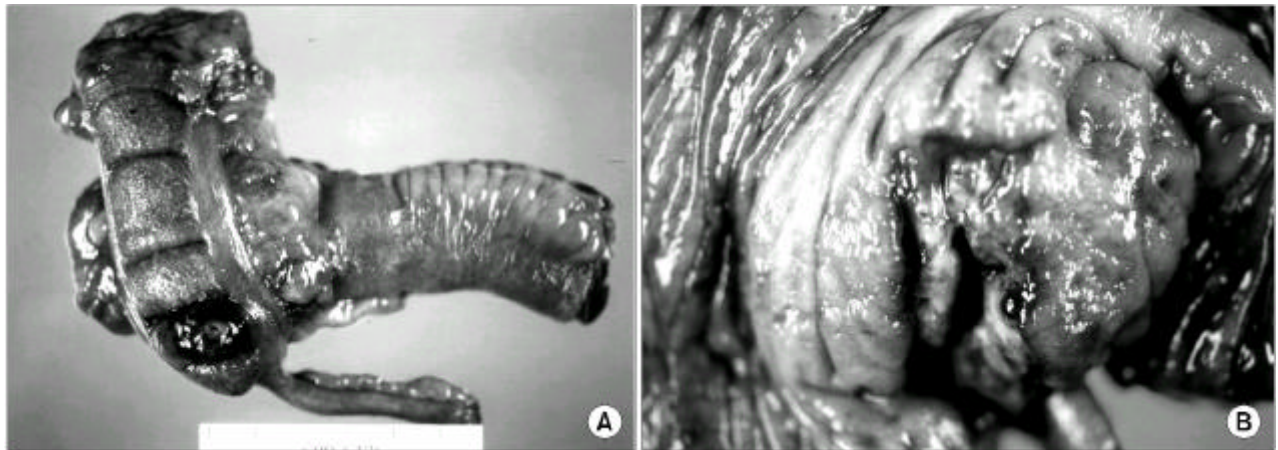
(Fig. 1).  
 : , 500  
 ml 가 ,  
 3×2 cm 가

(Fig. 2A, B).  
 :  
 (dense)

가  
 (pleo-  
 morphism) (Fig. 3).  
 NK Cell T  
 CD 56, UCHL-1, CD3 ,  
 TCRr . CD31, L26(-)  
 Cd68-, CD79a-CD20, LCA, UCHL1, CD45RO (Fig. 4)



**Fig. 1.** Colonoscopic examination. It shows multiple punctate ulceration.



**Fig. 2.** Gross specimen. Ulceration with perforation on the resected cecum (A), and main lesion in penetrating ulceration (B).

가  
(lobule)

가

2

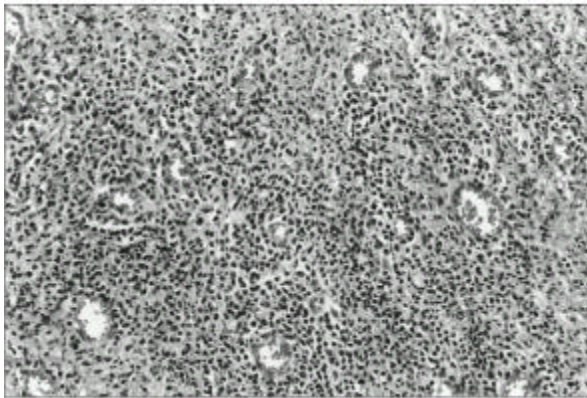
(Fig.

CHOP

5

5A, B).

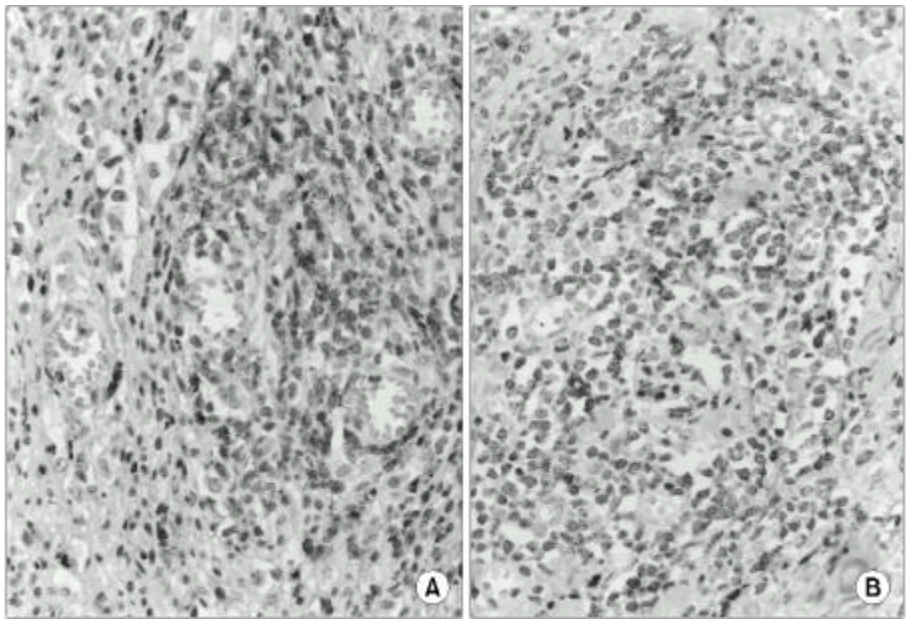
가 가



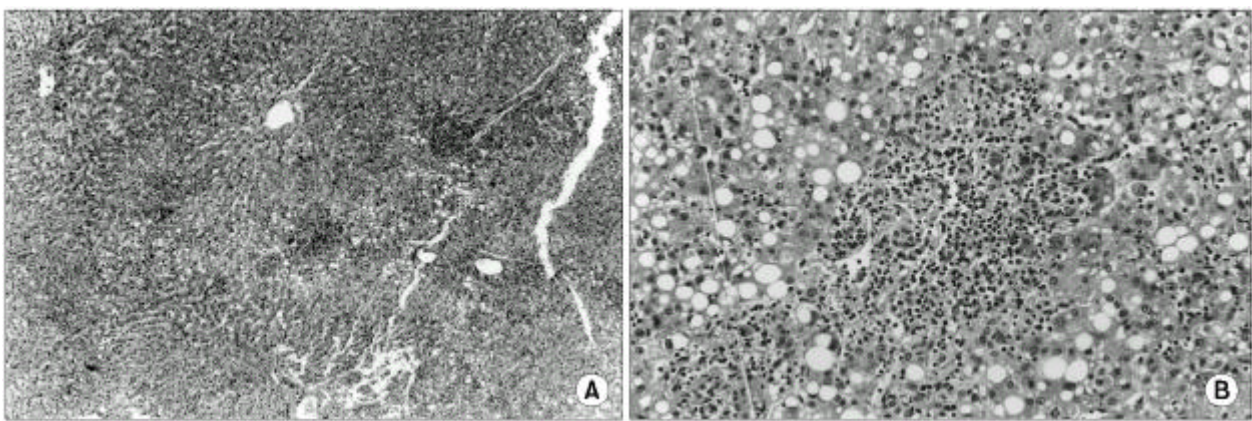
**Fig. 3.** Photographic finding of angiocentric polymorphous and composed of atypical small and large lymphocytes infiltration (H&E stain,  $\times 200$ ).

0.5% .<sup>8</sup> 40 70 3%  
 , HIV associated  
 ,  
 Dawson<sup>12</sup>  
 ,  
 X-  
 ,

가  
 가  
 가



**Fig. 4.** Photographic finding of immunohistochemical for CD3, CD56 positive lymphoid infiltrates (CD3, CD56 IHC stain,  $\times 200$ ).



**Fig. 5.** Liver also shows atypical polymorphous lymphocytes infiltration (A) (H&E stain,  $\times 40$ ), (B) (H&E stain,  $\times 200$ ).

가

3,14-16

NK cell

Lewin

13

, S

B

(MALT; mucosa associate lymphoid tissue)

NK cell

, T

NK cell 가 NCI (National Cancer Institute) diffuse small cleaved cell, diffuse mixed small and large cell, diffuse large cell large cell immunoblastic lymphoma

가

가

1,2 REAL (Revised European American Lymphoma) peripheral T cell lymphoma

NK cell

가 1,3,7

nasal/nasal type T/NK cell lymphoma . Peripheral T cell lymphoma (PTL)

가

Hsiao 17

7

pan T cell expression) HIV III-related PTL, Gluten-enteropathy associated, T cell (aberrant

6 3 CD56+ NK cell

, Chan 3 non-nasal type

5

가 가

PTL . NK cell CD 56+ LGL, angio-centric ATLL/L (aggressive)

가

가

3-5

가

5

lymphomatoid granulomatosis (LYG) ,

가

polymorphic reticulosis (PMR), midline malignant reticulosis (MMR)

가

4,5

(atypical lymphocytes) (angiocentric distribution) T-cell marker

(an-

NK cell

(colonic crypt)  
 가  
 (gene rearrangement)  
 IgH TCRr polyclonal NK cell  
 Lewin<sup>13</sup>  
 가  
 가  
 가

NK cell

## REFERENCES

- Jaffe ES, Chan JKC, Su IJ, Frizzera G, Mori S, Feller AC, et al. Report of the workshop on nasal and related extranodal angiocentric T/Natural killer cell lymphomas. *Am J Surg Pathol* 1996;20:103-11.
- Grogan TM, Miller TP, Fisher RI. A southwest oncology group perspective on the Revised European-American Lymphoma Classification. *HematoOncology Clin North Amerca* 1997;11:819-46.
- Chan JKC, Sin VC, Wong KF, Ng CS, Tsang WYW, Chan CH, et al. Nonnasal lymphoma expressing the natural killer cell marker CD56: A clinicopathologic study of 49 cases of an Uncommon aggressive neoplasm. *Blood* 1997;89:4501-13.
- Tsang WYW, Chan JKC, Timothy TC, Ng CS, Wong KF, Poon YF, et al. In situ localization of epstein-barr virus encoded RNA in non-nasal/nasopharyngeal CD56-positive and CD56-negative T cell lymphomas. *Human Pathology* 1994;25:758-65.
- Martin AR, Chan W, Perry DA, Greiner TC, Weisenberger DD. Aggressive natural killer cell lymphoma of small intestine. *Modern Paphology* 1995;8:467-72.
- 27 1992;24:1246-59.
- Nakamura S, Suchi T, Koshikawa T, Kitoh K, Koike K, Komatusu H, et al. Clinicopathologic study of CD56 (NCAM)-positive angiocentric lymphoma occurring in the sites other than the upper and lower respiratory tract. *Am J Surg Pathol* 1995;19:284-96.
- Henry CA, Berry RE. Primary lymphoma of the large intestine. *Am Surg* 1988;54:262-6.
- Lee MH, Waxman M, Gillooley JF. Primary malignant lymphoma of the anorectum in the homosexual men. *Dis Colon Rectum* 1986;29:413-6.
- Baker D, Chiprut RO, Lewin KF. Colonic lymphoma in ulcerative colitis. *J Clin Gastroenterol* 1985;7:379-86.
- Disario JA, Burt RW, Kendrick ML, McWhorter WP. Colorectal cancers of rare histologic Types compared with adenocarcinomas. *Dis Colon Rectum* 1994;37:1277-80.
- Dawson IMP, Cornes JS, Morson BC. Primary malignant lymphoid tumors of the intestinal tract reports of 37 cases with a study of factors influence prognosis. *Br J Surg* 1961;49:80-8.
- Lewin KJ, Ranchood M, Dorfman RF. Lymphomas of the gastrointestinal tract: a study of 117 cases presenting with gastrointestinal disease. *Cancer* 1978;42:693-707.
- Chan JKC, Tsang WYW, Lau WH, Cheung MMC, Ng WF, Yeun WC, et al. Aggressive T/Natural killer cell lymphoma presenting as testicular tumor. *Cancer* 1996;77:1198-205.
- Dargent JL, Roufosse B, Vanderschueren C, Nouwync C, Salhadin A, Jamisin S, et al. Ntural killer-like T-cell lymphoma of the stomach. *Scand J Gastroenterol* 1999;34:445-8.
- Weiss RL, Lazarus KH, Macon WR, Gulley ML, Kjeldsberg. Natural killer cell-like T-cell lymphoma in the small intestine of a child without evidence of entriopathy. *Am J Surg Pathol* 1997;21:964-9.
- Hsiao CH, Lee WI, Chang SL, Su IJ. Angiocentric T cell lymphoma of the intestine: a distinct etiology of ischemic bowel disease. *Gastroelteroogy* 1996;110:985-90.