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Case Report

A Primary T-Cell Lymphoma of Descending Colon?

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Case report

The patient, a 24-year-old man, complained of a pain in his left flank for 4 months. He was hospitalized for the severe pain and fever. An emergency operation was performed because CT-scan and intestinal irrigation indicated a stricture and a perforation of the descending colon. The patient was negative for HTLV-I antibodies. Two months after surgery, the patient died of pneumonia caused by Candida albicans and cytomegalovirus infection. A post-mortem examination confirmed that there was no lymphoma cell infiltration to any organ. Family history showed that an elder brother had died of a malignant lymphoma when he was 16 years old.

Results

The tumor was limited to the descending colon. The descending colon showed necrosis because of perforation. Light microscopically, lymphoma cells showed diffuse infiltration and had polymorphic figures. The nuclei were medium-sized and large, and clumped and marginal heterochromatin could be seen. A few mitoses could be observed. The nuclear irregularity was less than that of ATLL (Figure 1). When stained paraffin-immunohistochemically, the lymphoma cells were positive for UCHL-1 (Figure 2), but negative for L 26 and BerH2. This case was diagnosed as a diffuse, large cell type lymphoma according to the Japanese LSG classification, and HTLV-I-negative pleomorphic medium and large cell type, according to the updated Kiel classification.

Discussion

One of the 5 participants diagnosed this lesion as CB/CC, one as a B-cell immunoblastic type lymphoma, one as pleomorphic lymphoma, one as pleomorphic, large cell type lymphoma and one as pleomorphic medium and large cell type lymphoma. Dr. Nakamine was surprised that this case was T-cell lymphoma, and asked whether the patient had special immunological background because his elder brother had died of malignant lymphoma. But no immunological disorder was noted in patient's case history sheet. The patient was always afraid of having the same malignant lymphoma as the brother, but the details of the malignant lymphoma of the elder brother are not clear. Dr. Takeshita asked whether there was a possibility of this case being natural killer cell lymphoma, because natural killer cell lymphoma is often found in the nose, skin and gastrointestinal tract. This question couldn't be answered because we hadn't examined additional features, or made an EM study. Prof. K. Lennert said that this lymphoma might be a secondary lymphoma of the MALT type, because he found a MALT type lymphoma and lesions of an unclassified high grade lymphoma in which lymphoma cells had multilobated nuclei. This lymphoma was also negative for CD3, and there was no evidence of T-cell features in this case. Dr. Takeshita suggested that natural killer cell lymphoma might be negative for CD3. Prof. S. Mori said that natural killer cell lymphomas often related to EB virus infection.

After the seminar, we perfomed immunological staining for CD3 and CD7, and in site hybridization using oligonucleotides for the EV virus. The lymphoma cells in some aresa were positive for CD3 (Figure 3), but negative for CD7. So we would like to diagnose this case as a diffuse large T-cell type lymphoma, according to the Japanese LSG classification. As the lymphoma cell had a probe which showed specific activity for EB virus (Figure 4), it is suggested that this case may be an EB virus infected lymphoma. However at present it is not clear what relationship there is between EB virus infection and the development of malignant lymphoma.

Key word: Descending colon lymphoma, T-cell, EB virus

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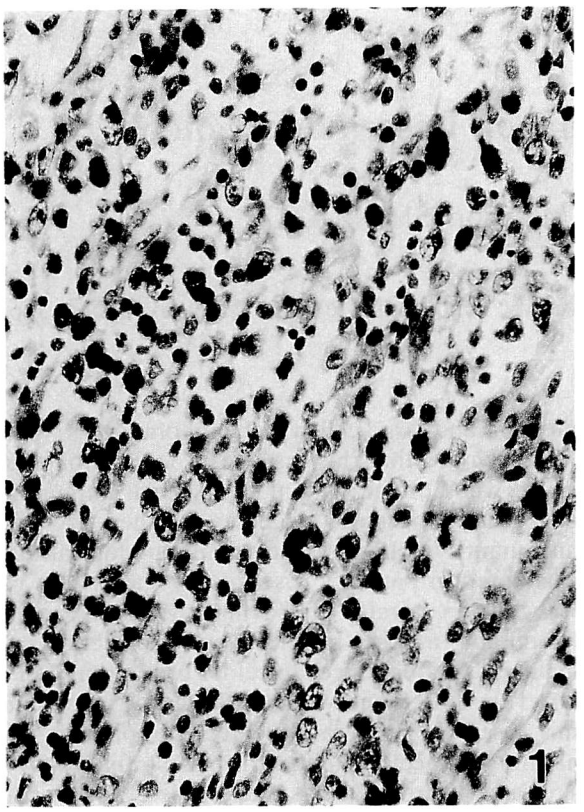


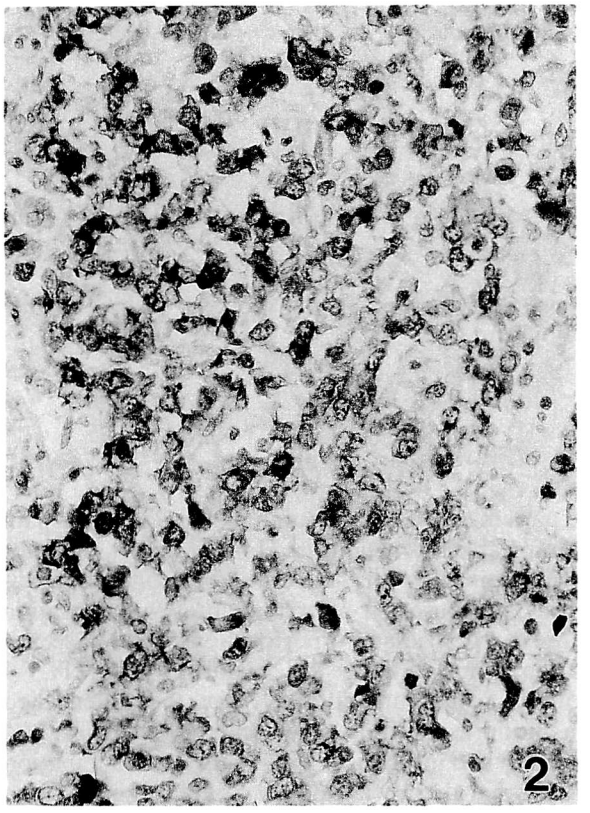
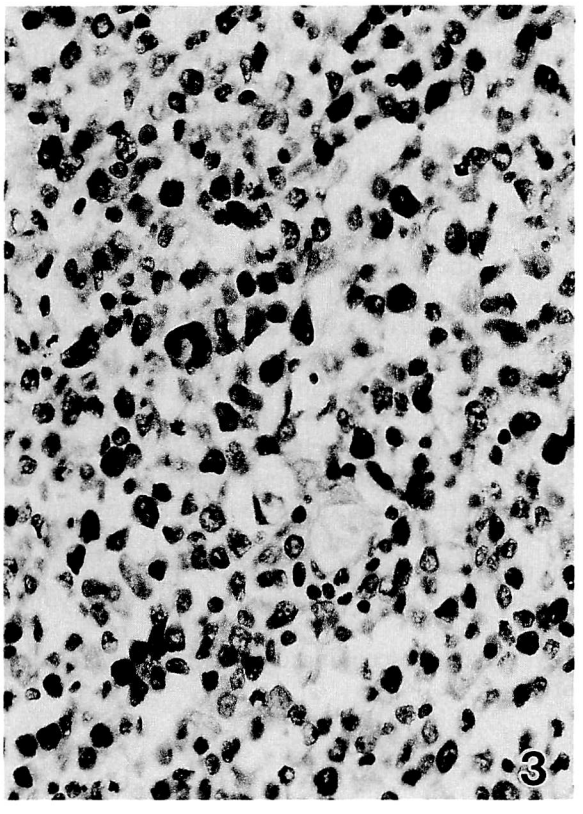


Fig. 1. Lymphoma cells diffusely infiltrated. The nuclear shapes are medium-sized and large, with a polymorphism. x 460
Fig. 2. Lymphoma cells positive for UCHL-1. x 460



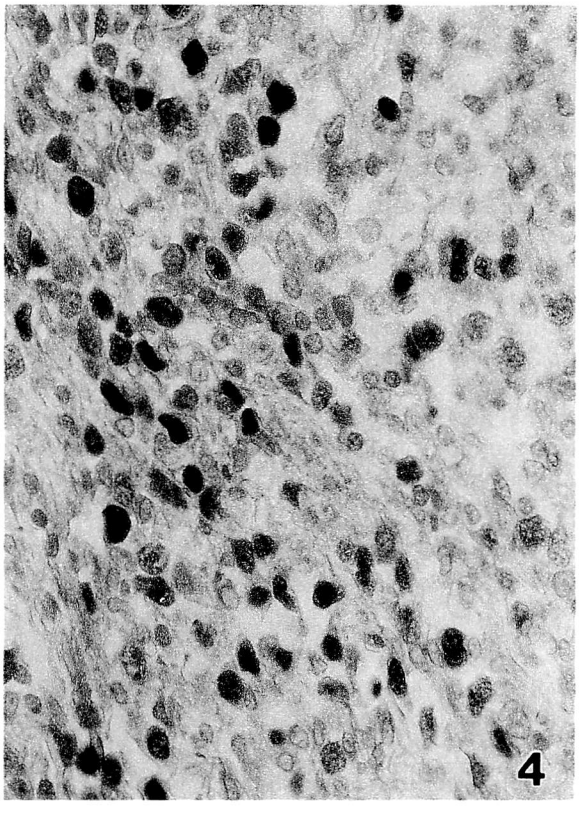


Fig. 3. Lymphoma cells also positive for CD3. x 460
Fig. 2. EB virus positive cells are sparsely distributed. x 460