Case Report

Enteropathy-associated T-Cell Lymphoma of the Jejunum Complicated with Intestinal Perforation

Enteropathy-associated T-cell lymphoma (EATL) is a rare, well-documented complication of celiac disease, accounting for less than 1% of the non-Hodgkin's lymphomas. Perforation as the presentation of intestinal lymphoma is rare, and as the presentation of EATL is even rarer. Herein, we report a 56-year-old female with EATL of the jejunum complicated with intestinal perforation. She was admitted because of sudden onset of severe abdominal pain. Emergent exploratory laparotomy was done under the impression of perforative peptic ulcer, however, an ulcerative tumor with perforation was noted unexpectedly at the proximal jejunum. After tumor resection and end-to-end anastomosis of the jejunum, the patient received eight courses of CHOP (cyclophosphamide, Adriamycin, Oncovin, and Prednisolone) chemotherapy. Now she has been disease-free for one and half years after the diagnosis. From our experience and that of others, we consider that combination chemotherapy should be helpful for patients with EATL.

CASE REPORT

A 56-year-old female was admitted because of sudden onset of severe abdominal pain. She had abdominal fullness for 1 month, but denied the past history of sprue such as diarrhea and malabsorption. Vital signs showed BP: 107/71 mmHg, PR: 80/min, RR: 18/min, and BT: 36.7 °C. Physical examination revealed muscle guarding of the abdomen. Blood routine revealed Hgb: 12.4 gm%, WBC 24,800/cumm with 86.6% of neutrophils, and...
platelet: 340,000/cumm. KUB revealed free air over both subcostal margins (Fig. 1). Emergent exploratory laparotomy was done under the impression of perforated peptic ulcer, however, an ulcerative tumor with perforation was noted unpredictively at the proximal jejunum (Fig. 2). Then the patient received tumor resection and end-to-end anastomosis of the jejunum.

Histologically, the tumor revealed malignant lymphoma (Fig. 3). Immunohistochemical study of the tumor cells showed positive staining for leukocyte common antigen (LCA) and CD3 and negative staining for CD20 (Fig. 4). The jejunal mucosa distant from the tumor showed villous atrophy with crypt hyperplasia, and increase in intraepithelial lymphocytes.
mor re vealed villous atrophy with crypt hyperplasia that was consistent with celiac disease (Fig. 5). Based on these findings, the diagnosis of EATL was made. Bone marrow aspiration and biopsy were normal. Computed tomography (CT) of the abdomen was done before chemotherapy and revealed small mesenteric lymph nodes and jejunal wall thickening (Fig. 6). Then, the patient received eight courses of CHOP (cyclophosphamide, adriamycin, oncovin and prednisolone) chemotherapy, and follow-up CT scan was normal. Now she has been disease-free for one and half years after the diagnosis.

**DISCUSSION**

Celiac disease, also known as gluten-sensitive enteropathy, is characterized by an enteropathy sensitive to gluten, resulting in symptoms of malabsorption. The characteristic pathologic manifestations of celiac disease are villous atrophy with crypt hyperplasia of the intestinal mucosa. An increased risk of malignancy, especially EATL, has long been noted in patients with celiac disease.2,3

Harris et al. suggested the mean in ter val between diagnosis of celiac disease and lymphoma was 21.2 years.5 However, later studies conducted by Brandt et al and Cooper et al. suggested mean intervals of 3 years and 5 years, respectively.5,6

The histology of the small intestine remote from the site of the tumor is an important consideration in the diagnosis of EATL. In most cases, the changes are identical with those of celiac disease, including villous atrophy with crypt hyperplasia, plasmacytosis of the lamina propria and increase in intra-epithelial lymphocytes. Only a few cases, so-called latent celiac disease, have abnormal intestinal mucosal immunity without histologic evidence of villous flattening.3,7 The diagnosis of EATL in our patient was based on the histology and immunohistochemistry of the jejunal lesion re vealed T-cell lymphoma, and microscopic changes distant from the lesion consistent with celiac disease.

Isaacson et al. found that the tumor of EATL apparently originates from intraepithelial lymphocytes in the small intestine.8 Wright suggested that it arises in the setting of celiac disease and evolves from intraepithelial lymphocytosis through low-grade lymphoma to a high-grade tumor, possibly under antigen drive from gliadin peptides.9 In Isaacson et al. study, they even confirmed the monoclonal T-cell receptor β-chain gene rearrangement in genotypic studies of EATL.8

The median age at the diagnosis of EATL is 60 years, with slight male preponderance. This tumor may in volve any part of the small intestine, but usually affects the jejunum. It frequently involves multiple segments of the small intestine and has already disseminated at the time of diagnosis. Mesenteric lymph node enlargement is characteristic. Other common sites of dissemination include the liver, spleen, bone marrow, lung and skin.

The clinical course of EATL is very unfavorable because most cases in volve multiple segments of the intestine rendering resection impossible or having already disseminated beyond the mesenteric lymph nodes and out of the abdomen. There fore, Gale et al. suggested that once diagnosed, combination chemotherapy should be considered for all patients.10

In the study of Gale et al., study, they found 14 (58.3%) of 24 patients with EATL respond to chemotherapy. Although 79% of them relapsed, the actual 1-year and 5-year survival rate still were 38.7% and 19.7%, respectively.10 These were relatively higher than the report of Egan et al., that overall 1-year and 5-year survival rates were 31% and 11%, respectively.11 Our patient has been disease-free for one and half years after ter...
operation and chemotherapy. We agree with Gale et al. that chemotherapy is helpful for the patients with EATL.

In conclusion, the prognosis of patients with EATL is poor due to its late diagnosis and poor performance status of patients at the time of diagnosis. The diagnosis of lymphoma in patients with celiac disease can be extremely difficult, but the presence of a cluster of symptoms such as abdominal pain, malabsorption, and weight loss in patients older than 40 years with a history of poorly responsive celiac disease should raise a suspicion of malignancy. Combination chemotherapy should be helpful for patients with EATL.

REFERENCES