Acute lymphoid leukemia developing in the course of Crohn's Disease: Are there any guilty agents?

Nergiz Ekmen1, Güray Can2, Hadi Sasani3

1Department of Gastroenterology, Faculty of Medicine, Gazi University, Ankara, Turkey
2Department of Gastroenterology, Faculty of Medicine, Abant Izzet Baysal University, Bolu, Turkey
3Department of Radiology, Faculty of Medicine, Tekirdağ Namık Kemal University, Tekirdağ, Turkey

Corresponding author: Nergiz Ekmen.
E-mail: dr_nergisekmen@hotmail.com; ORCID: 0000-0002-7921-3169

Introduction
Crohn's disease is a chronic inflammatory gastrointestinal system disease of unknown etiology that causes deterioration in the patient's quality of life [1]. A chimeric immunoglobulin monoclonal antibody [anti-tumor necrosis factor alpha (anti-TNF-α)] drugs that neutralize the biological activity of TNF-α have revolutionized the treatment approach of inflammatory bowel disease (IBD) patients with severe or refractory disease in the last two decades [2-4]. However, these drugs pose a risk as a cause of triggering and/or emergence of various malignancies. In recent years, after various anti-TNF-α treatments, hematological malignancies such as lymphoma, acute myeloid leukemia and fewer hematological malignancies such as acute lymphoid leukemia have been reported [5].

We aimed to report a Philadelphia chromosome positive acute lymphoid leukemia [Ph (+) ALL] patient after the use of infliximab and azathioprine for the treatment of severe Crohn's disease.

Case presentation
A 22-year-old male patient without a known disease was diagnosed with Crohn's disease with complaints of abdominal pain and weight loss, ileocolonoscopy images and histopathological findings of colonoscopic biopsy. Azathioprine treatment was started in the patient who was A2-L3-P (A2, between 17 and 40 years; L3, ileocolonic; P, perianal disease) according to the Montreal classification [6]. Infliximab 5 mg/kg was started as fistulas did not regress in 10 months of follow-up and Crohn's Disease Activity Index was above 150. Clinical response was obtained and perianal fistulas closed, after 3 months of this treatment. In blood tests, erythrocyte sedimentation rate and C-reactive protein, leukocyte and platelet counts were also found to be normal. However, it was seen that ileocolonic ulcers continued in endoscopic control (Figure 1). Azathioprine was discontinued after 10 months alone and 9 months in combination with infliximab. Skin lesions compatible with leukocytoclastic vasculitis appeared in the feet after using infliximab treatment for 23 months. Since this situation was thought to be related to infliximab, the patient was in clinical and biochemical remission, and infliximab treatment was discontinued. Aphthous ulcers in the colon were observed to persist in the colonoscopy performed while infliximab was discontinued (Figure 2). While C-reactive protein increased progressively during the
clinics. is followed up by hematology and gastroenterology outpatient treatment for Crohn's disease for 5 years, is in remission and antigen (HLA) sibling donor. The patient, who has not received father, since he was not a fully compatible human leukocyte transplanted with haploidentic stem cell transplantation from his and dexamethasone), remission was achieved and the patient was (including cyclophosphamide, vincristine sulfate, Adriamycin biopsy. After a total of 2 cycles of Hyper-CV AD chemotherapy and a diagnosis of Ph (+) ALL was made by bone marrow Cytogenetic examination revealed Philadelphia chromosome, with bone marrow aspiration and biopsy upon these findings. Pathological lymphadenomegalies were observed in the neck, thorax and abdominal CT scans (B, C, D) showing aphthous ulcers in the colon. Lymphadenopathies in the axillary region (arrow heads). Asymptomatic peripheral smear. Cytogenetic procedure was performed (Figure 3). The hematologist detected blastic cells in the (9 gr/dL) were observed in hemogram analysis. On physical lymphocytes), thrombocytopenia (41000/mm3) and anemia (80.5% leukocytosis [32400/mm3 (9 gr/dL) were observed in hemogram analysis. On physical examination, lymphadenopathies in the neck and bilateral inguinal region were detected. Pathological lymphadenomegalies were observed in the neck, thorax and abdominal CT scans (Figure 3). The hematologist detected blastic cells in the peripheral smear. Cytopathological examination was performed with bone marrow aspiration and biopsy upon these findings. Cytopathological examination revealed Philadelphia chromosome, and a diagnosis of Ph (+) ALL was made by bone marrow biopsy. After a total of 2 cycles of Hyper-CVAD chemotherapy (including cyclophosphamide, vincristine sulfate, Adriamycin and dexamethasone), remission was achieved and the patient was transplanted with haploidentic stem cell transplantation from his father, since he was not a fully compatible human leukocyte antigen (HLA) sibling donor. The patient, who has not received treatment for Crohn's disease for 5 years, is in remission and is followed up by hematology and gastroenterology outpatient clinics.

14-month follow-up without treatment, complaints of weight loss and abdominal pain occurred.

Adalimumab treatment was planned for the patient who did not accept colonoscopic examination. Three weeks after adalimumab treatment leukocytosis [32400/mm3 (80.5% lymphocytes), thrombocytopenia (41000/mm3) and anemia (9 gr/dL) were observed in hemogram analysis. On physical examination, lymphadenopathies in the neck and bilateral inguinal region were detected. Pathological lymphadenomegalies were observed in the neck, thorax and abdominal CT scans (Figure 3). The hematologist detected blastic cells in the peripheral smear. Cytopathological examination was performed with bone marrow aspiration and biopsy upon these findings. Cytopathological examination revealed Philadelphia chromosome, and a diagnosis of Ph (+) ALL was made by bone marrow biopsy. After a total of 2 cycles of Hyper-CVAD chemotherapy (including cyclophosphamide, vincristine sulfate, Adriamycin and dexamethasone), remission was achieved and the patient was transplanted with haploidentic stem cell transplantation from his father, since he was not a fully compatible human leukocyte antigen (HLA) sibling donor. The patient, who has not received treatment for Crohn's disease for 5 years, is in remission and is followed up by hematology and gastroenterology outpatient clinics.

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