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IMMUNE THROMBOCYTOPENIC PURPURA IN A CHILD WITH HODGKIN'S DISEASE*

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SUMMARY: Berberoğlu S, Sarıalioğlu F, Akyüz C, Kutluk T, Büyükpamukçu M. (Oncology Unit, Department of Pediatrics, Hacettepe University Faculty of Medicine, Ankara, Turkey). Immune thrombocytopenic purpura in a child with Hodgkin's disease. Turk J Pediatr 1995; 37: 289-292.

The occurrence of immune thrombocytopenic purpura (ITP) in Hodgkin's disease is uncommon. This report describes a patient who developed ITP twice before splenectomy, and for the third time several years later, preceding an abdominal relapse of the disease. We suggest that patients with a history of Hodgkin's disease undergo diligent searches for active disease when ITP is diagnosed. ITP may be the only manifestation of active disease and may preceed histologic documentation of Hodgkin's disease by months or years. *Key words: Hodgkin's disease, immune thrombocytopenic purpura.*

Thrombocytopenic purpura is commonly seen in Hodgkin's disease as a result of bone marrow failure due to the disease or secondary to treatment with chemotherapy or radiation therapy[1,2]. On the other hand, immune thrombocytopenic purpura (ITP) is less common[3]. It is unusual in young children, but seen more often in adolescents[4]. Some patients present with ITP at initial diagnosis, whereas others are diagnosed in the course of the disease. This report describes a child with Hodgkin's disease who had three episodes of profound thrombocytopenic purpura unrelated to bone marrow failure.

Case Report

A twelve-year-old boy was admitted to Hacettepe Children's Hospital with a mass in the left cervical area. A diagnosis of clinical IVA, mixed, cellular Hodgkin's disease was made on the basis of clinical and laboratory findings. According to our sandwich therapy protocol, combined COPP chemotherapy was initiated.

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Three courses of chemotherapy and low-dose, involved field radiation therapy (2000 cGy) and then three more courses of COPP chemotherapy were administered with no major problem. He was in complete remission in August 1987. Chemotherapy was stopped in October 1987, and the patient was followed until March 1990 with no evidence of disease.

In March 1990, the patient presented with easy bruising. On physical examination the only pathological finding was petechial lesions. The platelet count was 50,000/mm^3. In the peripheral blood smear, platelets were rare with no clumps. Bone marrow aspiration showed a marked increase of megacaryocytes. Abdominal ultrasonography demonstrated a hypoechoic lesion with a diameter of 8 mm in the parenchyma of the splenic hilum. Bone marrow biopsy was normal, no treatment was given. One week later, thrombocytopenia disappeared spontaneously.

In August 1990 the patient presented with epistaxis and multiple petechiae. He also complained of night sweats, itching and fever. Physical examination revealed multiple bilateral, cervical microlymphadenopathies. On peripheral blood smear no platelet clumps were seen and single platelets were common. The platelet count was 60,000/mm^3. Bone marrow biopsy was normal. Abdominal ultrasonography demonstrated multiple hypoechoic areas in the spleen. Prednisone administration at a daily dose of 40 mg/m^2 was initiated and continued for one month. One month later, the platelet count rose to 300,000/mm^3 and the steroid was stopped. Splenectomy was then performed and histological examination revealed active Hodgkin's disease in the spleen. Intensive investigations revealed no residual disease. The decision was made to follow the patient with no treatment.

Nearly two years later, in February 1992, the patient was readmitted to the hospital with nose bleeding and multiple petechiae all over the body. There was no evidence of Hodgkin's disease. The platelet count was 6,000/mm^3. The prothrombin time and partial-thromboplastin time were normal. Direct Coombs test, antinuclear antibody (ANA) and lupus erythematosus (LE) cell were negative. IgA, IgG and IgM were normal. The throat culture was negative, and there was no recent infection or drug administration history. On the basis of clinical and laboratory findings, a diagnosis of immune thrombocytopenic purpura was made. Prednisolone at a dose of 40 mg/m^2 was initiated. In the first week, the thrombocyte count increased to 60,000/mm^3 and the petechiae disappeared. Steroid therapy was continued for one month, yielding normal thrombocyte counts.

In September 1992 the patient was readmitted to the hospital because of fatigue and weight loss. Multiple paraaortic and parailiac lymph nodes were noted on abdominal ultrasonography. All other laboratory tests were normal. A diagnosis of relapsed Hodgkin's disease was made, and ABVD combination chemotherapy

was started. Six courses of chemotherapy were given with no problem. At his last follow-up in February 1994, the patient was well and free of disease.

Discussion

ITP associated with certain malignant lymphoproliferative diseases, such as chronic lymphocytic leukemia and non-Hodgkin's lymphoma, has been well documented[5]. However, ITP associated with Hodgkin's disease is unsual. As of 1979, 30 patients had been reported in the English literature[6]. In seven cases, the data were not sufficient to characterize ITP syndrome, except that in at least three cases it preceded Hodgkin's disease[7-9]. In the remaining 23 patients, ITP syndrome appeared at the time of or subsequent to the diagnosis of Hodgkin's disease[6]. In a recent report, a 37-year-old woman with treated Hodgkin's disease in remission was admitted to the hospital with ITP and recurrent Hodgkin's disease involving the stomach and paragastric lymph nodes[10]. Two patients with Hodgkin's disease who developed severe ITP with negative platelet antibody studies very soon after splenectomy have also been reported[6].

Our patient experienced three attacks of ITP. In the first two episodes, the patient was believed to have ITP and Hodgkin's disease, apparently limited to the spleen, which was docmented by splenectomy. After a two-year period of remission, the patient again presented with an ITP picture, and after therapy with corticosteroids his thrombocytopenia recovered but Hodgkin's disease reappeared within a period of seven months.

The incidence of ITP in Hodgkin's disease has been reported as two percent in the literature[6]. Between 1972 and 1992, 629 patients were diagnosed with Hodgkin's disease in our department. This case is the only patient with ITP and Hodgkin's disease in our series.

Rudders et al.[1] reported three patients with Hodgkin's disease who exhibited marked thrombocytopenic purpura without marrow replacement by tumor or fibrosis. Initially the patients presented with thrombocytopeniae. After extensive evaluation, they were diagnosed as having Hodgkin's disease with localized splenic involvement. The authors discussed the issue that patients with Hodgkin's disease who peresent with this picture could be easily confused with patients who have true ITP, may have an occult recurrence, and were likely to have involvement of the spleen which could be best managed by splenectomy. In the majority of the reported cases of immune thrombocytopenia complicating Hodgkin's disease or other lymphomas, the occurrence of thrombocytopenia has preceded the appearance or reccurrence of active malignancy. Most authors conclude that an aggressive search for the underlying malignancy must be undertaken[5, 11, 12]. In our patient ITP was present at the time of occurrence of disease in the spleen. The third time, ITP preceded the occurrence of relapse. Thus it can be concluded that ITP in our patient signalled the recurrence of Hodgkin's disease.

Our observation on the association of ITP and Hodgkin's disease is in general agreement with previous reports[1, 12]. It is recommended that patients with a history of Hodgkin's disease undergo a diligent search for active disease when ITP is diagnosed. It should be remembered that ITP may be the only manifestation of active disease and may preceed histologic documentation of lymphoma by months or years[1, 6, 12].

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