short report
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IMMUNE THROMBOCYTOPENIC PURPURA SECONDARY TO ENDOMETRIOSIS

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ABSTRACT

In this paper, we describe a patient with immune thrombocytopenic purpura (ITP) secondary to endometriosis. To our knowledge, this is the first reported case presenting such an association. Surgical eradication of the endometriosis was the only effective treatment for the thrombocytopenia. The pathogenic connection between both disorders seems to be an altered immune function.

Key words: thrombocytopenia, endometriosis, platelet antibodies

Immune thrombocytopenic purpura (ITP) can be secondary to a variety of malignant and non malignant disorders.[1,2] Within the non malignant disorders a great variety of conditions such as chronic viral infections (e.g. infectious mononucleosis , HIV, hepatitis C), chronic inflammatory disease,[3] pregnancy, drug treatments (e.g. quinidine, heparin) and autoimmune diseases are included. Here, we report on the case of a 29-year-old patient with endometriosis and ITP. We suggest that an altered immune function may be the possible pathogenic link between both disorders.

Case Report

A 29-year-old previously healthy woman was admitted to our Hospital with symptoms of weakness, headache, hematomas after minimal trauma one month earlier, which was accentuated in the previous week. Four days earlier, coinciding with her menstrual period, she experienced lower abdominal pain for several hours. She had never had painful menstruations before. Physical examination revealed pallor, hematomas in her legs and arms, and abdominal resistance in the lower right quadrant of the abdomen.

Hematological findings were: Hb 8.1 g/dL with 2.3% reticulocytes, leukocyte count was 18×10^9/L with 85% neuthrophils and platelet count was 11×10^9/L. Coagulation screen and blood chemistry values were normal. The direct Coombs test was negative. The examination of the peripheral blood smear revealed no abnormalities. Antiplatelet antibody examination revealed the presence of Ig M antibodies in the direct test.[4] Bone marrow aspiration showed a normal hemopoiesis with a normal level and morphology of megakaryocytes. Examination by ultrasonography revealed the presence of an echogenically heterogeneous pelvic mass of 10.5×9 cm on the right side of the bladder. It was interpreted as a pelvic hematoma. Other possibilities were an ovarian tumor or a peritoneal hemorrhagic cyst. A diagnosis of ITP with secondary pelvic hematoma was established. Two hours after admission, the patient presented severe hypotension. Transfusion of 2 units of red blood cells together with 7 units of platelets were administered immediately. Simultaneously, treatment with intravenous Ig (1 g/kg, for 2 days) and corticosteroids (prednisone, 2 mg/k) was begun. A rise in the platelet count up to 23×10^9/L was observed in the following 48 hours, but the number immediately decreased again and the platelet count was maintained at 2×10^9/L. Two weeks later, the patient presented evident hematuria, subconjunctival hemorrhage and epistaxis. She received another course of intravenous Ig, but showed no change in the platelet count. Three weeks after admission, treatment with cyclosporin was begun and corticosteroids were progressively tapered. Ultrasonography control was performed weekly and showed no changes in the pelvic mass. This latter observation was rare for a pelvic hematoma, as there are usually changes in the mass size due to resorption. For this reason, a gynecological examination and computed tomography were performed and the diagnosis was changed to presumed ovarian tumor with secondary ITP. The patient was scheduled for a laparotomy. Since the platelet count was still 2×10^9/L, an intensive program including plasma

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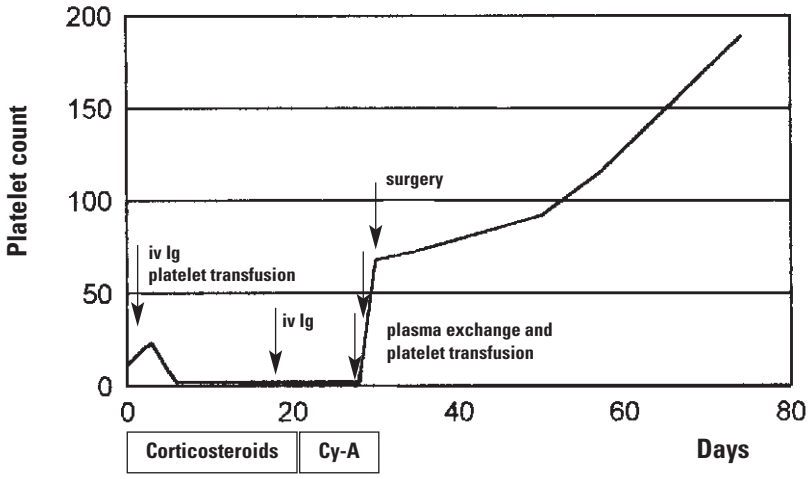

Figure 1. Platelet count levels upon admission.
Platelet count is expressed as number of platelets x 10^9/L.

exchanges, platelet transfusion and a bolus of intravenous Ig was administrated just before the surgical operation and an increase in the platelet count up to 68×10^9/L was achieved. Figure 1 shows the evolution of platelet count.

The laparotomy was performed without complications. The ovarian tumor was resected and the biopsy disclosed ovarian endometriosis. Four weeks after the operation, platelet count was 100×10^9/L without any further medical treatment. A complete recovery was observed within 6 weeks and subsequent platelet antibody tests were negative. One year later, the patient is still in good health with a normal platelet level.

Discussion

ITP can be associated with several disorders but to the best of our knowledge, this is the first case in which ITP can be considered as secondary to endometriosis. During the past decade, evidence has multiplied, indicating an association between endometriosis and changes in humoral and cell-mediated immunity.[5,6] Development of endometriosis may then prompt a humoral response in some women, which results in the production of autoantibodies to cell antigens. Based on this background, it can be speculated that autoantibodies could have generated in our patient's endometriosis, and then may have cross-reacted with the platelet proteins causing the ITP.

IgG antibodies in ITP are most frequently responsible for the thrombocytopenia,[7] although IgM antiplatelet antibodies have also been reported.[8] It is uncertain whether these patients differ from ITP with IgG antibodies in the pathophysiology of their thrombocytopenia.

Our patient presented ITP refractory to immunoglobulins, corticosteroids and immunosupressors. Plasma exchange has been used successfully in some refractory patients. Plasmapheresis appears to have at least a temporary adjuvant role in managing some disorders characterized by circulating autoantibodies, such as ITP during a traumatic event.[9,10] In our case, this procedure was extremely useful and helped to increase the platelet count up to a safe level in order to carry out the surgical procedure.

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