Evans Syndrome in Renal Transplantation: Correlation between Drops in Platelet and Red Blood Cell Counts and Rejection

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Dear Sir,
Immune thrombocytopenic purpura (ITP) can occur in patients with kidney transplantation in whom a ‘drop’ in platelet count can be the only clinical expression of this disease [1]. ITP can be associated with autoimmune hemolytic anemia in Evans syndrome [2]. In a transplanted patient with ITP we detected features of Evans syndrome and found a highly significant correlation between the increase in serum creatinine associated with rejection on the one hand, and platelet and RBC drops on the other hand.

A 59-year-old woman who had undergone cadaveric renal transplantation in January 1979 presented a serum creatinine of 2 mg/dl while under therapy with azathioprine 50 mg/day and prednisone 25 mg/day. In October 1995, an immune thrombocytopenic crisis with a platelet count of 80,000/mm3 was diagnosed in the presence of direct and indirect antiplatelet antibodies. A previous drop in platelet count (50,000/mm3) dated back to June 1987 during an episode of rejection (serum creatinine up to 2.3 mg/dl). By that time, RBC count was 2,910,000/mm3 with a Hb of 9 g%. A cross-match was positive for HLA-A33 antigen. Enhanced antirejection therapy resolved the episode of rejection (creatinine 1.1 mg/dl) and increased the platelets (up to 180,000-220,000/mm3) as well as RBCs (up to 3,870,000/mm3) within 5 days.

In August 1987, a thrombophlebitis of the right leg led to hospital admission associated with thrombocytopenia (60,000/mm3) and autoimmune hemolytic anemia (3,125,000/mm3) with a positive direct and indirect Coombs’ test.

In this patient we analyzed the serum creatinine values and platelet and RBC counts during 3 hospital admissions for rejection episodes and 5 hospital admissions not related to rejection (ureteral stenting, acute gastroenteritis, pulmonary infection, cyclosporine toxicity), as shown in table 1.

Asymptomatic drops in platelet count (80,000-120,000 platelets/mm3) and hemolytic anemia (< 3,000,000/mm3) have been detected during hospital admissions for rejection, and an enhancement in immunosuppressive therapy either resolved the rejection or increased platelet and RBC count.
A significant correlation between creatinine increase and RBC and platelet drops in rejection has been documented (platelets 60,890 ± 19,405 during rejection episodes and up to 225,363 ± 18,147 out of rejection; RBCs 3,496,000 ± 138,254 during rejection and up to 4,694,545 ± 1,658,722 out of rejection; p < 0.001). When hospital admission was not related to rejection, we could not detect such a correlation. In this transplanted patient, we detected either ITP or hemolytic anemia featuring together in Evans syndrome [2-4] as originally described in 1949. This case seems to be the first description of Evans syndrome in a renal transplant patient and therefore we recommend a careful analysis of mild immunohematological episodes in renal transplant patients. Only such an approach could lead to the definitive and correct diagnosis of Evans syndrome.

Thrombophlebitis that is a clinical hallmark of the syndrome had been present in this patient, as a single episode, 9 years before the definitive diagnosis [5]. The data we have reported suggest that rejection and immunohematological events may occur together [6]. ‘Momentary immunological breakdowns’ in the therapeutic effectiveness of immunosuppressive therapies can cause an imbalance between production and destruction of blood cells. Even mild hematological events can herald the full-blown symptoms of renal rejection, and this observation is worth this report.

Table 1. Platelet and RBC counts during rejection and outside rejection episodes

Student’s t test for platelet and RBC counts. A = Rejection-related data; B = data not related to rejection; n = number of determinations.

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