Plasma Exchange in Acute Renal Failure Due to Postpartum Hemolytic-Uremic Syndrome

Report of a Case

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Dear Sir,

In females with early or late postpartum hemolytic-uremic syndrome (HUS), the features of the illness are acute renal failure and microangiopathic hemolytic anemia in association with thrombocytopenia and increased serum bilirubin levels [1]. Severe irreversible renal failure is the rule; nevertheless, cases have been reported with a favorable outcome [2]. The pathogenesis of the HUS is still unknown: circulating substances (endotoxins, vasoactive amines, etc.) are likely to produce the primary injury to the endothelial cells of the glomerular capillaries [3].

Moreover, some patients appear to have a lack of a prostaglandin plasma inhibitor [4], and intravascular coagulation also might be induced by immunoglobulin factors [5]. Therefore, plasma exchange treatment with fresh plasma infusion has been suggested [6].

We have observed a 32-year-old female affected with early postpartum HUS. The kidney biopsy showed glomerular thrombotic microangiopathy. The patient received plasma exchange treatment for 3 consecutive days and then every 3rd day the following week with an exchange of one plasma volume at each procedure, using fresh plasma as 50% of the substitution fluids. Regression of the HUS and partial recovery of renal function were observed. The patient was discharged on the 16th hospital day with normal blood pressure, renal function, and hematologic picture. For 3 years she has been well (fig. 1).

The early treatment with plasma exchange and fresh plasma infusion possibly conditioned a favorable course of the disease.

Plasmapheresis

Bilirubin, mg/100 ml

Platelets 500 ·

count/mm³

300 200–100

Serum creatinine, mg/100 ml

Urine 1,500