Letter to the Editor

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Postpartum Hemolytic-Uremic Syndrome

How Poor is the Prognosis ?

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Sir.

Dr. Per Brandt et al. [1] report the administration of antithrombin-III to be useful in the treatment of postpartum hemolytic-uremic syndrome. The conclusion of its efficacy is based on a favorable outcome and a quick return of the renal function in a condition they state has a poor prognosis.

We consider the projected mortality to be overstated, which would make the contribution of anti-thrombin-III unclear. Accordingly, we report a case similar to theirs in which no specific therapy was employed and a favorable outcome resulted within a short time frame.

A healthy 39-years-old white woman, gravida IV, para III, with a pregnancy of 35 weeks was admitted for abdominal pain approximately 6 h prior to a normal spontaneous vaginal delivery. The pregnancy had been uncomplicated; however, the fetus was small for dates. She developed hypertension with blood pressure as high as 200/120 mmHg. Magnesium sulfate infusions were instituted and continued after delivery. Oliguria was noted shortly after delivery with a urinary excretion of approximately 10 ml/h.

On physical examination 2 h postpartum, the blood pressure was 200/110 mm Hg, the pulse was 80 beats/min, and the respirations were 16/min. Erythema of the face and chest was evident. Positive physical findings were limited to a laterally displaced point of maximal impulse on cardiac examination with a grade 2/6 systolic ejection murmur, atrial diastolic gallop, and systolic click. The liver was 18 cm in span, 3 cm below the right costal margin. The spleen was palpable.

Pigmented and granular casts with numerous red blood cells were noted on urinalysis. A urine osmolality of 303 mosm/kg was recorded, and 4+ blood and 3+ protein noted on dipstick. The peripheral blood smear, which was normal on admission, had schistocytes, fragments, and microspherocytes 4 h later. The platelet count was 42,000/ml.

Methylprednisolone, 75 mg/day, was started for possible vascular stabilization. Within 1 day, she developed right-sided focal seizures and was started on diphenylhydantoin. Indications of intravascular coagulation were apparent; latex test 40 µg/ml (normal 0–8 µg/ml), staphylococcal clumping time 16 µg Fe/ml (normal 0–4 µg Fe/ml), and a thrombin time of 29.8 s (control 20.7 s). The fibrinogen was 265 mg/dl; and the haptoglobin 0.

The urine output increased to greater than 50 ml/h by the 2nd day, however, the serum creatinine continued to rise, peaking on the 6th day at 9.2 mg/dl. The platelet count reached a low of 7,000, remaining at approximately 50,000 the 1st week before returning to normal.

During the 2nd week after admission, laboratory measurements returned towards normal, and the patient was discharged after 3 weeks with a creatinine of 1.3 mg/dl. Follow-up examinations 1 year later were consistent with normal renal function. Our case report illustrates a favorable outcome without specific therapy in a patient with hemolytic-uremic syndrome, and acute renal failure associated with pregnancy. This is, in fact, generally the rule in hemolytic-uremic syndrome associated with pregnancy and evidence of toxemia, hemorrhagic shock, or septicemia [2]. Brandt et al. [1] apparently consider their case to be part of the subpopulation originally described by Robson et al. [3] in which acute renal failure occurs several days or weeks after normal delivery and recovery is less common. In a review of the literature, Segonds et al. [4] record a fatal outcome in 61% of 49 cases, nearly all of whom had this symptom-free interval. In view of the fact that the patient described by Brandt et al. [1] was preeclamptic with evidence of renal insufficiency prior to delivery and developed signs of hemolytic-uremic syndrome soon after delivery, we would hesitate to classify her in the latter subpopulation. Recovery is generally the rule in hemolytic-uremic syndrome associated with pregnancy and any contribution of anti-thrombin-III to a favorable outcome remains uncertain.

References

Brandt, P.; Jespersen, J.; Grefersen, G.: Postpartum haemolytic-uraemic syndrome treated with antithrombin-III. *Nephron* 27: 15–18(1981).

Annotation. Hemolytic uraemic syndrome of young women. *Lancet* i: 1943–1944 (1976).

R. Robson

J.S.; Martin

A.M.; Ruckley

A.V.; McDonald

M.K.: Irreversible postpartum renal failure: a new syndrome. *Q. Jl Med.* 37: 423–435 (1968).

Segonds

A.; Louradour

N.; Sue

J.M.; Orfila

C.: Postpartum hemolytic uremic syndrome: a study of three cases with a review of the literature. *Clin. Nephrol.* 12: 229–242 (1979).