COMMUNICATIONS

A fatal case of tolmetin-induced immune hemolysis, disseminated intravascular coagulation, and acute renal failure

To the Editor:

A 56-year-old black female with a history of hypertension and arthritis of the knee was admitted with gastrointestinal bleeding, possible disseminated intravascular coagulation, and "black urine." The patient had no history of blood transfusions. Prior to admission, the patient had been medicated with Tolecin® (tolmetin sodium, 400 mg per day) for 2 weeks, and indocin (50 mg per day) for the previous 6 weeks. The medications were prescribed for her arthritis. Laboratory results were as follows: hematocrit was 25 percent, reticulocytes 5.2 percent, prothrombin time and partial thromboplastin time >90 seconds, fibrin split products >40 mcg/mL, fibrinogen <50 mg/dL, haptoglobin <5 mg/dL, lactate dehydrogenase 4,174 IU/L, total bilirubin 7.7 mg/dL, and orange-brown serum.

The antibody screen of the patient's serum was strongly positive in all phases, her red blood cells were autoagglutinated, and the direct antiglobulin test was strongly positive because of coating with IgG and C3d. The serum contained a warm reactive autoantibody reacting with c- and Rh null cells in neat serum, but showing anti-e-like specificity when the serum was diluted. The titer of the autoantibody was 1:4 in the absence of drug and 1:1,024 in the presence of a 1 mg/mL solution of tolmetin. Autoadsorption of the serum with ZZAP-treated autologous cells (x4) removed antibody reactivity. Alloantibodies to common antigens were excluded. An eluate was nonreactive until the addition of the 1 mg/mL tolmetin solution.

Ten hours postadmission, the patient's hematocrit was 15 percent and she experienced cardiac arrest. When the patient stabilized, an exchange transfusion of eight units of red cells and fresh-frozen plasma was attempted to remove autoantibody. At the end of the exchange, the patient's plasma had changed color from dark brown to yellow-brown. However, the patient's condition continued to deteriorate and further exchange was not attempted. She expired 48 hours postadmission. Tolmetin-induced hemolysis has been described previously.1-3 This is the second reported fatal case of drug-induced hemolytic anemia related to tolmetin.4

References

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Unusual occurrence with directed donors

To the Editor:

This reference laboratory recently encountered a series of serologic problems associated with a pregnant patient, her newborn son, and several directed donors.

The patient, who had no previous pregnancies but had been transfused with one unit of red cells three years ago, was experiencing bleeding during the 34th week of her current pregnancy. Red cells were collected from six directed donors at another collection facility within a period of 2-3 days. The patient's antibody
screen was negative and she was transfused with two of the directed donor units. Two weeks later (approximately 6 days prior to her scheduled Caesarean section), her hemoglobin level was 7.4 g/dL. Units three and four were crossmatched. The antibody screen was now positive and both units were incompatible. Units five and six were crossmatched and one was compatible.

This reference laboratory was alerted to the serologic findings at this point by a person calling to inquire whether it was acceptable to transfuse the compatible unit. Our instruction was to withhold the transfusion until the antibody could be identified.

Anti-Fy^a was identified in both the serum and an eluate prepared from the patient’s cells. Anti-Fy^a probably became demonstrable as the result of an anamnestic response.

Arrangements were made for the collection of six additional directed donor units that were Fy(a−). The patient was transfused with two of the Fy(a−) units the day before her scheduled Caesarean section.

When inquiry was made concerning the status of the infant, the laboratory staff submitted the cord blood sample. The infant had a positive direct antiglobulin test, and anti-Fy^a was recovered in an eluate prepared from the infant’s red cells. The bilirubin was not significantly elevated, and treatment of the infant was not required.

This case demonstrates that when directed donor units are collected in the same time period and are to be used over several days or weeks, the sudden appearance of red cell antibody may preclude use of some of the units.

Time and circumstances do not always permit the use of directed donors as planned. However, this situation does not alleviate the need to adhere to accepted transfusion practice.

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Ortho Dedication

From the Editor:

The editorial staff of *Immunohematology* is grateful to Ortho Diagnostic Systems, Inc., for its generous contribution each year in support of publication of the third issue (September) of the journal.

Ortho is a leading, worldwide manufacturer of reagents for the blood bank. It has a history of leadership in the blood bank field, including support of educational endeavors and development of monoclonal antibodies, infectious disease screening tests, and Rh immune globulin.

At the 1991 American Association of Blood Banks meeting in Baltimore, I presented an award to Mr. William W. Crouse, Worldwide President, Ortho Diagnostic Systems, Inc., and Vice President, Johnson and Johnson International, as a token of our appreciation for continued support of *Immunohematology* (see photo below).

Delores Mallory
Editor-in-Chief

Note: Recognition and appreciation of such donation in no way represents Red Cross endorsement of any company or product.

Free Poster

From the Editor:

As promised in the last issue of *Immunohematology*, a poster entitled “Effect of enzymes on and chemical modifications of red cell antigens” based on the table published in Geoff Daniels’ article in this issue will be ready for complimentary distribution at the American Association of Blood Banks (AABB) Annual Meeting this year.

The 17” X 22” poster has been designed so that future findings on the effect of enzymes and chemical