

ABID CASE #8

1. What is the probable identity of this antibody?

Cold-reactive anti-M.

2. Why aren't many of the antigen positive cells reacting?

Dosage effect.

3. Is any further workup needed to prove it? Why was the second panel run?

Antibody is proved (Could show reactivity with all cells at lower temp or using acidified serum.) The pre-warmed test results determine how units are selected.

4. What would we require to consider a unit of RBCs compatible for this patient? (see procedure #116)

Crossmatch compatible by an IAT. No special antigen typing is required.

5. What would you expect to find after dithiothreitol treatment of the serum and rerunning the panel (look up DTT in the technical manual)? What about after enzyme treatment of the panel RBCs?

Both would eliminate the reactivity.

6. Is the patient at risk for an immediate hemolytic transfusion reaction? *No* A delayed hemolytic transfusion reaction? *Rare*

7. Would this antibody be expected to cause hemolytic disease of the newborn?

No; check for anamnestic response in 3rd trimester.

8. What is the biochemical nature of the antigen? What is the basis for the polymorphism between this antigen and its antithetical antigen?

The M and N antigens are carried by glycophorin A, a single pass membrane glycoprotein carrying 60% of the negative charge on the RBC. M varies from N by two amino acids. M and N are sensitive to proteases.