

## ACUTE HEMOLYTIC ANEMIA IN A 15 YEAR OLD

### ANSWERS:

1. What is the specificity of the antibody in this case?

*Auto-anti-i*

2. What is the association between this antibody specificity and EBV infection? What other associations are there between immune hemolytic anemias and infection?

*Anti-i is relatively common in infectious mononucleosis but immune hemolytic anemia is not, appearing in 0.1 to 3% in different studies. Although hemolysis is described as occurring at the same time as the first symptoms of the infection, usually it begins 1 to 2 weeks after the onset of symptoms and resolves in less than one month.*

*Other associations of autoimmune hemolytic anemia (AIHA) with infection include Mycoplasma pneumoniae and cold autoimmune hemolytic anemia (CAIHA) due to anti-I, and syphilis with paroxysmal cold hemoglobinuria (PCH) due to Donath-Landsteiner antibody (anti-P biphasic hemolysin). An immune hemolytic anemia is reported as an uncommon complication of a number of other infections including HIV, CMV, HCV, and varicella, but there is no antibody specific to these associations. Warm autoimmune hemolytic anemia and PCH occurring after a non-specific upper respiratory illness are also well known.*

3. Why did the platelet count increase and then decline during the hospitalization? Similarly, explain the course of the patient's MCV.

*Platelets are acute phase reactants. The platelet count probably rose in response to his systemic inflammatory response to EBV infection and then fell as he began to recover. The rise and fall in the MCV probably reflects the burst of reticulocytes in his peripheral blood that led to the rapid recovery of the hematocrit in this young, otherwise healthy man.*

### COMMENT:

*This case is presented because of the classic serologic findings of autoimmune hemolysis associated with Epstein Barr Virus, as well as the classic picture of a hemolytic anemia.*