TRALI: Pregnancy

Pearl: Transfusion-related acute lung injury (TRALI) is a serious respiratory complication of transfusion. It is the leading cause of transfusion-related mortality in the United States.

Many cases of TRALI are caused by HLA or HNA antibodies.

During pregnancy anti-HLA antibodies are produced. Approximately **10-20% of female blood donors** with history of pregnancy and 1-5% of male donors harbor these antibodies.

Management of the patient with TRALI includes immediate discontinuation of the transfusion and reporting to the blood bank that TRALI is suspected. Therapy is supportive with supplemental oxygen and ventilatory support with lung protective strategies when clinically indicated. Although the risk for mortality is significant, patients who survive a TRALI episode are expected to recover completely.

Prevention: Prevention of TRALI involves deferring donors implicated in a case of TRALI from future platelet apheresis, plasma apheresis, and possibly also whole blood donation. Donations from multiparous women are most likely to contain anti-leukocyte antibodies. Most developed countries have adopted a policy of supplying transfusable plasma products (plasma, platelets, and whole blood) exclusively or predominantly from male donors, female donors with no prior pregnancy, or from donors who test negative for HLA-antibodies

Question:

In order to minimize TRALI it is best to:

a. Use plasma donated from females with history of pregnancy
b. Use plasma donated from males who tested positive for HLA-antibodies
c. Use plasma from females who tested positive for HLA-antibodies
d. Use plasma from a female donor who tested negative for HLA-antibodies

Answer: D – see keyword