

Practical Problems in Transfusion Medicine

Transfusion Therapy Case Study 1

Part 2: Additional Information and Further Studies

Upon speaking to the physician in the Emergency Room it is discovered that the patient feels well, is in good health, and has no history of bleeding. Although she has a few petechiae on the lower extremities, she is not actively bleeding from any other site.

The peripheral blood smear is reviewed and no platelet clumps are seen. In addition, no schistocytes are present. A prothrombin time and partial thromboplastin time are normal.

HELPFUL FACTS **Platelet Clumps**

The electronic platelet count performed on particle counters distinguishes platelets according to their size. If the particle size is excessive, it will not be counted as a platelet. Some individuals have developed EDTA dependent platelet agglutinating antibodies that cause clumping of platelets or adhesion of platelets to leukocytes resulting in a false low platelet count, termed “pseudothrombocytopenia”. In this case, review of the peripheral smear confirms that such abnormalities are not present and permits acceptance of the electronic count with certainty.

HELPFUL FACTS

Schistocytes

The presence of schistocytes (fragmented red cells) is the morphologic hallmark of mechanical hemolysis. Their presence in the peripheral blood together with thrombocytopenia might suggest disseminated intravascular coagulation (DIC) or thrombotic thrombocytopenic purpura (TTP), for which there is no evidence in this case.

- **What is the most likely diagnosis for this patient?**
- **Is any other information required prior to deciding whether platelets should be transfused?**
- **Can any other suggestions be offered to the physicians caring for the patient for future work-up and management?**