

Before the use of transfused platelets, hemorrhage was a leading cause of death in children with some types of cancer. Now most bleeding episodes can be prevented or controlled with judicious administration of platelet concentrates or platelet-rich plasma. Severe spontaneous internal hemorrhage varies but usually does not occur until the platelet count is $20,000/\text{mm}^3$ or less (Hockenberry, Kline, and Rodgers, 2016).

Platelet transfusions are generally reserved for active bleeding episodes that do not respond to local treatment and that may occur during induction or relapse therapy. Epistaxis and gingival bleeding are the most common. The nurse teaches parents and other children measures to control nose bleeding. Applying pressure at the site without disturbing clot formation is the general rule. Platelet concentrates normally do not have to be cross-matched for blood group or type. However, because platelets contain specific antigen components similar to blood group factors, children who receive multiple transfusions may become sensitized to a platelet group other than their own. Therefore, platelets are cross-matched with the donor's blood components whenever possible.

During bleeding episodes the parents and child need much emotional support (see [Critical Thinking Case Study](#) box). The sight of oozing blood is upsetting. Often parents request a platelet transfusion, unaware of the necessity of trying local measures first. The nurse can help calm their anxiety by explaining the reason for delaying a platelet transfusion until absolutely necessary. Because compatible donors decrease the risk of antigen formation in the recipient, the nurse should encourage parents to locate suitable donors for eventual blood use.

Critical Thinking Case Study

Bleeding

Paul, 14 years old, is undergoing chemotherapy for non-Hodgkin lymphoma (NHL) but has recently been hospitalized with an infection. He last received chemotherapy 12 days ago. His current platelet count is $28,000/\text{mm}^3$. He has noticeable petechiae on his arms and legs with multiple bruises in various stages of healing.