



Laboratory Service Manual

Transfusion Services

STRATEGIES FOR PLATELET REFRACTORY PATIENTS

Platelet refractoriness, defined as a poor increment or rise in platelets following the infusion of a dose of platelets, can result from either immune or nonimmune mechanisms. Antibodies against HLA antigens usually cause immune-mediated platelet refractoriness, but antibodies to platelet-specific antigens may also be involved. Nonimmune clinical factors such as sepsis, high fever, disseminated intravascular coagulopathy, medications, hypersplenism, complement-mediated destruction or a combination of these may produce a refractory state.

For patients without an adequate response (correct count increment) to pooled random donor platelets or apheresis platelets, the following sequence is recommended (indicate as “Special Instructions” on the Transfusion Request Order Form):

1. ABO-identical apheresis platelets
2. “Fresh” (less than 3 days old) ABO-identical apheresis platelets
3. Compatible crossmatched apheresis platelets*
4. HLA-matched apheresis platelets*

*Additional time and patient specimen is required. Consult with Children’s Transfusion Service for more information.

Treatment with IVIG, corticosteroids, stopping the offending drug, or treating the underlying cause may also benefit the patient if nonimmune factors are involved. Children’s Pathology Staff or the Blood Center physicians are available for consultations as needed.