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TRM.44950, TRM.40550

PLATELETPHERESIS
(LEUKOREDUCED)
TXPLT

I. PRINCIPLE

Platelet products must be ordered by a physician and may be useful if given prophylactically to patients with rapidly decreasing or low platelet counts (usually less than 10,000/μL) secondary to cancer, marrow aplasia or chemotherapy. Platelet transfusion may also be useful in selected cases of postoperative bleeding, e.g., platelet count less than 50,000/μL. If platelet function is normal, platelets should not be transfused if the platelet count is greater than 100,000/ μL.

II. CLINICAL SIGNIFICANCE

Platelet transfusion is indicated for treatment of patients bleeding due to critically decreased circulating platelet count or functionally abnormal platelets. Platelet transfusions are not usually effective or indicated in patients with destruction of circulating platelets due to autoimmune disorders, e.g., immune thrombocytopenic purpura (ITP).

III. SPECIMEN

A. A blood sample drawn in a pink K_2 EDTA tube will be used to perform the ABO/Rh typing.

IV. REAGENT

A. Anti- A and Anti- B used to perform ABO testing per procedure for blood typing.
B. Anti- D used to perform Rh testing per procedure for blood typing.
C. ABO + Rh control

V. INSTRUMENTATION/EQUIPMENT

A. Helmer Platelet incubator/agitator.
B. Thermometer (Red Spirit) to monitor room temperature (20 - 24° C) if Platelet incubator/agitator is not in service.
C. American Rotator V to agitate platelets if Platelet incubator/agitator is not in service.

VI. SUPPLIES

A. 12 X 75 mm test tubes
B. Disposable plastic pipettes
C. Centrifuge
D. Blood Bank Saline

VII. QUALITY CONTROL

A. ABO/Rh daily reagent QC is performed per procedure.
B. Standardized thermometer to measure the room temperature storage (20 - 24° C).

C. The ARC tests for bacterial contamination in apheresis platelets (SDP) and platelets, pooled, leukocyte reduced (PSP). Testing is conducted utilizing an FDA approved bacterial culturing method. The ARC reserves the right to conduct tests using an alternative FDA approved detection system in the future.

VIII. PROCEDURE

A. Confirm physician's order for appropriate product.
B. In the very rare instance of a plateletpheresis being ordered for a baby, call the pathologist for further instructions.
C. Type patient sample. (See ABO +Rh Procedure)
    1. Platelets should be ABO compatible (unless ABO compatible units are not available at the American Red Cross, then another type may be given).
    2. Platelets for Rh negative female patients of child bearing age must be Rh negative.
    3. If the American Red Cross determines there are more than 2 cc's of contaminating RBC's in a plateletpheresis product, a pilot tube will accompany the product so a crossmatch may be performed with the recipient's plasma/serum. The staff of the American Red Cross will notify us, and get approval before shipping a plateletpheresis with a pilot tube. Any platelet- pheresis with a pilot tube must be crossmatched to the recipient prior to transfusing the product. This crossmatch is recorded in the log book (for computer downtimes) or in the computer and noted on the component tag that the product is crossmatch compatible.
C. Record on BB worksheet for computer downtimes. Any other time, record reactions and interpretations for ABO +Rh testing in Sun Quest-Blood Order Processing.
D. Order Platelet pheresis leukoreduced or leukoreduced irradiated by:
    1. Using the ARC Connect website for all routine orders or
    2. In emergencies, call the Emergency Cell Phone 309-370-4394
E. When received from Red Cross, scan platelet pheresis unit in Sun Quest-Blood Product Entry.
F. Place in the platelet incubator and turn on the agitator (making sure incubator is 20-24°C).
G. From the patient's TXPLT order in BOP, click on the Allocation tab, then click on the green "Inventory Supply Search" button to bring up our platelet pheresis inventory. Chose the correct unit # for the patient and then click ok. The unit will then be allocated for that patient.
H. After checking over all results, put an "OK" in the Transfusion Status box next to the allocated unit by using the "] " key on the keyboard.
I. Click the SAVE button at the bottom of the screen, and you unit tag(s) will print.
J. Attach unit tag to the platelet pheresis bag with a tag fastener.
K. Notify the floor or treatment center so they know product is available.

L. Document on the Blood Bank Note line in Sun Quest-BOP, the person who was notified and the time.
M. Sign out product according to sign out procedure.
N. Preparing pheresis for transfusion:
    1. Pheresis products occasionally are collected and stored in two bags containing approximately equal volume of product. The two bags must be combined into one bag prior to infusion.
    2. To combine the bags it is necessary to maintain the closed system. The bags should not be combined more than one hour before infusion. (The pH of the product will deteriorate as the volume per bag increases).
    3. Mix the contents of both bags well by gently agitating the bags back and forth.
    4. Open the roller clamp on bag "B" so that bag "A" will flow into bag "B".
    5. Invert bag "A" and raise it to a level above the ports of bag "B".
    6. Open the roller clamp on bag "A" and allow the product to flow by gravity into bag "B"/
    7. After all the product has transferred into bag "B", close the roller clamp to bag "B".
    8. Seal with metal clasp above roller clamp.
    9. Bag "A" can be detached and discarded.
    10. Add the volume of bags "A" and "B" together and record the new volume of bag "B" on the label.
    11. Pooled Apheresis components expire 24 hours after pooling or on the date stated on the component, whichever is earlier. Record the correct expiration date on the bag label and on the unit tag.

IX. METHOD LIMITATIONS

A. Do no use this component if bleeding is unrelated to decreased numbers of, or abnormally functioning platelets. Do not use in patients with destruction of endogenous or transfused platelets, such as in TIP or ITP, unless the patient has a life-threatening hemorrhage.

X. PROCEDURAL NOTES/PROBLEM SOLVING

A. Platelet products may be ordered from Red Cross up to 24 hours prior to transfusion.
B. If the platelet incubator/agitator is not functional:
    1. Hold at room temperature 20 - 24° C. Move the Red Spirit thermometer next to the rotator.
    2. Place on rotator to maintain viability (60 - 65 rpm).
    3. Record room temperature every four hours while on rotator.
    4. Make a note to take temperature on Chemistry whiteboard
C. Platelets must be administered through the standard blood administration tubing with a 170- to 260- micron filter.

XI. REFERENCES

A. Circular of information for the use of Human Blood and Blood Components, by AABB 10/2017, America's Blood Centers and American Red Cross.
B. AABB Technical Manual, Bethesda, Maryland, 19th Edition, 2017.

POLICY CREATION	***Date***
Author: Sharrol Brisbin, MT (ASCP)	***03/01/1993***
Medical Director: Sheikh, MA, MD	***03/01/1993***

MEDICAL DIRECTOR		
DATE	NAME	SIGNATURE
6/04/19	Lori Racja	LhDO
SECTION MEDICAL DIRECTOR		

REVISION HISTORY (began tracking 2011)			
Rev	Description of Change	Author	Effective Date
01	Changed ordering plt pher (routine) to ARC Connect website, added phone # for emergency orders.	Jenny Turner	05/06/19

Lead	Date	Coordinator/ Manager	Date	Medical Director	Date
Jennifer Turner	5-23-19				