

TRAINING UPDATE

Lab Location: SGAH and WAH
Department: Blood Bank

Date Implemented: 7.5.2013
Due Date: 7.31.2013

DESCRIPTION OF PROCEDURE REVISION

Name of procedure:
Red Blood Cell Transfusion in Sickle Cell Disease
Description of change(s):
<ol style="list-style-type: none">1. Added wording stating the sickle policy only applies to people with sickle cell disease NOT with people who have sickle cell trait.2. Updated sickle marker for patients from NSIK to SIK.

Non-Technical SOP

Title	Red Blood Cell Transfusion in Sickle Cell Disease	
Prepared by	Stephanie Codina	Date: 11/30/2010
Owner	Stephanie Codina	Date: 11/30/2010

Laboratory Approval		
Print Name and Title	Signature	Date
<i>Refer to the electronic signature page for approval and approval dates.</i>		
Local Issue Date:		Local Effective Date:

Review:		
Print Name	Signature	Date

Form revised 3/31/00

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1. PURPOSE

Patients who are identified to the blood bank as having sickle cell anemia will be transfused with packed red blood cells that are negative for hemoglobin S and antigen matched to the C, E, c, e, and K antigens of the recipient. Approximately one-third of sickle cell patients develop alloantibodies. Studies show that we can protect responder patients from becoming alloimmunized by providing partially antigen-matched red cells for transfusion.

2. SCOPE

This procedure applies to all patients who have been identified to the blood bank as having sickle cell disease (SS). This procedure does NOT apply to patients with sickle cell trait (AS).

3. RESPONSIBILITY

The blood bank will ensure partial phenotyping for the Rh and Kell antigens is performed on any patient identified as having sickle cell disease who has not been transfused in the previous 3 months. Subsequent transfusions will be phenotypically matched for the Rh and K antigens in addition to any antigen to which the patient has formed an antibody.

4. DEFINITIONS

Partially phenotypically-matched RBCs: Red blood cell products negative for the Rh and Kell antigens for which the recipient is negative. The antigens that will be matched include C, E, c, e, and K.

5. PROCEDURE

Step	Action
1	<p>The blood bank will be informed by the attending physician or nurse of the patient's sickle cell status. This will be done by one of the following methods:</p> <ul style="list-style-type: none"> A. Verbally called to blood bank via telephone B. Listed in the patient's diagnosis in the LIS C. Written on the transfusion order form
2	<p>The blood bank staff members, who receive the information, test the specimen, or fill the transfusion order will be responsible for ensuring the patient has the "SIK" marker added to their blood bank administrative data file in the LIS. This will represent the need for sickle-negative red cells in the future. Refer to procedure, "Entering Special Transfusion Attributes into the LIS."</p>
3	<p>BB staff members will antigen type the patient for the following antigens per procedure, "Antigen Typing."</p> <ul style="list-style-type: none"> A. C B. E C. c D. e E. K <p>If the patient has been transfused in the previous 3 months and no pre-transfusion specimen is available, notify a staff member with supervisory access so that he/she may put a comment in the patient's BAD file indicating why antigen typing could not be performed and instructing techs to test the patient in the future. When feasible, transfuse ABO/Rh compatible units that are negative for the C, E, and K antigens to patients who have not been phenotyped.</p>
4	<p>Crossmatch units per procedure, "Crossmatch."</p> <ul style="list-style-type: none"> A. Immediate spin crossmatches may be performed if the patient does not have current or historical antibodies as outlined by the crossmatch procedure. B. AHG crossmatches must be performed if the patient has a history of antibodies that require AHG crossmatch. Refer to procedure, "Crossmatch."
5	<p>Ensure that the patient receives phenotypically-matched, sickle cell-negative red blood cells for all future transfusions.</p> <p>Note: In emergency situations, time may not allow for the provision of phenotypically-matched blood products. However, if the patient has current or historical clinically-significant antibodies, blood negative for the corresponding antigens must be provided unless an emergency release form is signed by the patient's physician indicating the patient's condition is critical and transfusion must take place prior to finding compatible units.</p>

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6. RELATED DOCUMENTS

- SOP: Entering Special Transfusion Attributes into the LIS
- SOP: Antigen Typing
- SOP: Crossmatch

7. REFERENCES

Children’s Hospital and Research Center Oakland. How do I transfuse patients with sickle cell disease? Transfusion 2010;50:1881-1886.

8. REVISION HISTORY

Version	Date	Reason for Revision	Revised By	Approved By
		Supersedes WAH-SGAH B323.001		
000	2.13.2012	Section 5: Added requirement to attempt to issue C, E, K negative units to sickle patients who cannot be phenotyped due to recent transfusion	SCodina	NCacciabeve
001	6.14.13	Section 2: Added disclaimer that this procedure does not apply to patients with sickle cell trait. Section 5: Updated marker to “SIK.”	SCodina	NCacciabeve

9. ADDENDA AND APPENDICES

N/A