

Job Aid for customization by Health Authority and for pathologists to insert information

Appendix D: Table 11.4 Recommendations for Pathologist Comments - Transfusion Reaction Report

Code *	Transfusion Reaction Type	Explanatory Notes and Recommendations	Comments and Information
TRNO	No Transfusion Reaction	<p>A review of the patient's history, clinical and laboratory findings does not support a conclusion of a transfusion reaction. The patient's signs and symptoms are most likely due to the patient's underlying medical condition and unrelated to transfusion.</p> <p>No change in current transfusion practice is recommended.</p>	
TRFNH	Febrile Nonhemolytic Transfusion Reaction (FNHTR)	<p>Based on a review of the patient's history, clinical and serological findings the patient's symptoms are most consistent with a febrile nonhemolytic transfusion reaction (FNHTR).</p> <p>For recurrent febrile nonhemolytic transfusion reactions, premedication with an antipyretic may be considered, but is not supported by literature evidence. Consultation with a Transfusion Medicine Pathologist may be helpful if the patient experiences recurrent febrile reactions,</p>	<ul style="list-style-type: none"> • FNHTRs are most commonly the result of passive transfusion of inflammatory mediators, which accumulate during blood storage. • FNHTRs may also be immune-mediated due to either anti-leukocyte or anti-platelet alloantibodies present in either recipient or donor plasma.
TRA	Allergic Transfusion Reaction	<p>Based on a review of the patient's history and clinical findings, the patient's symptoms are most consistent with an allergic transfusion reaction.</p> <p>For recurrent allergic transfusion reactions, premedication with an antihistamine may be considered, but is not supported by literature evidence. Urgent consultation with a Transfusion Medicine Pathologist is suggested if the patient experiences a severe allergic or anaphylactic reaction.</p>	<ul style="list-style-type: none"> • Allergic reactions most commonly reflect sensitization to transfused plasma proteins or soluble substances in plasma. • Allergic reactions to platelets have also been linked to the accumulations of chemokines present in platelet alpha granules.

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TRANA	Anaphylactic Transfusion Reaction	<p>Based on a review of the patient's history and clinical findings, the patient's symptoms are most consistent with an anaphylactic transfusion reaction.</p> <p>Anaphylactic reactions can occur in patients with hereditary deficiencies of IgA or haptoglobin. Quantitation of serum haptoglobin and immunoglobulins and screen for anti-IgA are advised, ideally on a pretransfusion sample.</p> <p>The prevention of recurrent anaphylactic reactions in the case of confirmed IgA deficiency requires the use of washed red cells and plasma products prepared from IgA deficient donors</p> <p>Please consult with a Transfusion Medicine Pathologist to plan future transfusions.</p>	<p>Notes to Pathologist re Recipient Management</p>	
			Acute Phase	Use of steroids and/or epinephrine may be recommended.
			Future Transfusions	Consider the use of a 2 litre wash for red cells.
			Future Use of IVIG:	<ul style="list-style-type: none"> • Consultation with an Immunologist is recommended. • If IVIG is necessary, recommend product with the least IgA content.
TRAH	Acute Hemolytic Transfusion Reaction (AHTR)	The patient's symptoms, clinical findings and serological findings are in keeping with an acute hemolytic transfusion reaction due to <Insert Cause/Antibody>.	<ul style="list-style-type: none"> • A urine output of 100 mL/hr should be maintained by hydration with normal saline and the use of diuretics, if necessary. • Consultation with a clinical hematologist or internal medicine specialist is recommended. 	

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TRAH (cont)	Acute Hemolytic Transfusion Reaction (AHTR) (cont)		<ul style="list-style-type: none"> Remain vigilant for evidence of abnormal bleeding and/or DIC. A Nephrology consult may be required for management of electrolytes and fluid balance and/or impaired renal function.
TRDH	Delayed Hemolytic Transfusion Reaction (DHTR)	<p>The patient's symptoms, clinical findings and serological findings are in keeping with a delayed hemolytic transfusion reaction due to <Insert Antibody>. Over the next 2 to 3 weeks, the patient should be monitored for a decrease in hemoglobin, and impaired renal function.</p> <p>For future elective transfusions, components negative for this antigen must be issued. Please allow sufficient time for the laboratory to locate suitable product for this patient when planning future transfusions.</p>	
TRTACO	Transfusion Associated Circulatory Overload (TACO)	<p>The patient's symptoms and clinical/radiographic features are most consistent with transfusion associated circulatory overload (TACO).</p> <p>A slower transfusion rate may be necessary in future. Red cells/platelets/plasma may be infused over a maximum of four hours/unit. If a slower infusion rate is required in the future, consult with a Transfusion Medicine Pathologist for transfusion options.</p>	Splitting of units may be an option.
TRTRALI	Transfusion Related Acute Lung Injury (TRALI)	<p>The patient's symptoms and clinical/radiographic features are most consistent with transfusion related acute lung injury (TRALI).</p> <p>The laboratory has initiated the collection of patient samples to be sent to CBS for serologic confirmation of TRALI.</p> <p>Because TRALI represents an idiosyncratic reaction to a single blood donor, no</p>	During acute TRALI, diuretics are contraindicated due to decreased intravascular volume.

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		change in transfusion practice is necessary.	
TRTRALI (cont)	Transfusion Related Acute Lung Injury (TRALI) (cont)	TRALI is most commonly associated with passive transfusion of anti-leukocyte antibodies of donor origin which react with white cells in the recipient. TRALI can also occur in a subset of patients with predisposing risk factors, due to passive transfusion of neutrophil priming lipids in stored blood.	
TRPTRALI	Possible Transfusion Related Acute Lung Injury (TRALI)	<p>In the absence of an alternative clinical explanation and in the presence of another risk- factor for ARDS, the patient's symptoms are most consistent with a possible transfusion related acute lung injury (TRALI).</p> <p>Because TRALI represents an idiosyncratic reaction to a single blood donor, no change in transfusion practice is necessary.</p> <p>TRALI is most commonly associated with passive transfusion of anti-leukocyte antibodies of donor origin which react with white cells in the recipient. TRALI can also occur in a subset of patients with predisposing risk factors, due to passive transfusion of neutrophil priming lipids in stored blood.</p>	During acute TRALI, diuretics are contraindicated due to decreased intravascular volume.

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TRTAD	Transfusion Associated Dyspnea (TAD)	<p>In the absence of an alternative clinical explanation, the patient's signs and symptoms are most consistent with transfusion associated dyspnea (TAD).</p> <p>TAD is characterized by patient respiratory distress within 24 hours of transfusion that does not meet the criteria of Transfusion Related Acute Lung Injury (TRALI), Transfusion Associated Circulatory Overload (TACO), or allergic reaction. This respiratory distress cannot be explained by the recipient's underlying condition.</p>		
TRHYPO	Hypotensive Transfusion Reaction	<p>In the absence of an alternative clinical explanation, the patient's signs and symptoms are most consistent with a hypotensive transfusion reaction.</p> <p>Hypotensive reactions in adults are defined as a sudden drop in systolic blood pressure by ≥ 30 mm Hg and a systolic blood pressure below 80 mm Hg during the transfusion or within 4 hours of its completion without any other explanation. This reaction type may be accompanied by fever, rash and decreased oxygen saturation.</p>		<ul style="list-style-type: none"> Typically, the recipient's blood pressure recovers within minutes of discontinuing the transfusion. Recipients at risk for hypotensive reactions include those on ACE inhibitors, as bradykinin breakdown is blocked. Use of bedside leukoreduction filters has been implicated in hypotensive reactions even in the absence of ACE inhibitor use.
TRBACT	Bacterial Contamination Transfusion Reaction	Definite:	The laboratory and clinical findings are most consistent with definite bacterial contamination as the same organism (<Insert Organism name>) has been isolated in blood cultures from the patient and the <Insert component type.>. Contamination of the blood samples or laboratory contamination is not suspected.	

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		Probable:	<p>The laboratory and clinical findings are most consistent with probable bacterial contamination as the <Insert component type.> is positive for <Insert Organism name>. Contamination of the blood samples or laboratory contamination is not suspected.</p> <p><Choose to insert either:</p> <p>The patient's blood culture was negative for this organism and the patient <was or was not> on antibiotics.</p> <p>OR</p> <p>Samples were not collected on the patient for blood culture.></p>	
TRBACT (cont)	Bacterial Contamination Transfusion Reaction (cont)	Possible:	<p>The laboratory and clinical findings are most consistent with possible bacterial contamination as <Insert Organism name> has been isolated in the patient's blood cultures. Contamination of the blood samples or laboratory contamination is not suspected.</p> <p>Culture of the <Insert component type>was not done.</p>	
TRDS	Delayed Serological Transfusion Reaction	<p>The laboratory findings are consistent with a delayed serological transfusion reaction due to <insert antibody>.</p> <p>For future elective transfusions, components negative for this antigen must be issued. Please allow sufficient time for the laboratory to locate suitable product for this patient when planning future transfusions.</p>		
TRAM	Aseptic Meningitis	<p>In the absence of an alternative clinical explanation, the patient's signs and symptoms are most consistent with aseptic meningitis related to IVIG infusion.</p>		<ul style="list-style-type: none"> Recipient may experience headache with meningismus or a deterioration

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		<p>Aseptic meningitis is associated with high dose IVIG therapy and a rapid administration rate. Recurrence with future infusions is possible. Aseptic meningitis is an inflammatory noninfective complication and the CSF does not contain bacteria or viruses. Reported risk factors include a history of migraine or a diagnosis of ITP.</p> <p>Symptom onset may occur 24 to 48 hours post-therapy and resolve within 3 to 5 days. Treatment is symptomatic using narcotics and anti-emetics. No serious long term sequelae have been reported.</p>	<p>in mental status after receiving IVIG.</p> <ul style="list-style-type: none"> Recipient may also have fever, nausea, vomiting, pharyngitis, diarrhea, and photophobia. Aseptic meningitis appears to be more common in recipients with ITP, neurological disease or a history of migraine than in immunodeficient subjects. The etiology is unclear, but it may be due to a hypersensitivity reaction to components of the IVIG preparation.
TRAM (cont)	Aseptic Meningitis (cont)	Suggest reassessment of the need for IVIG. If necessary, recommend a lower dose and /or a slower rate of infusion.	<ul style="list-style-type: none"> Symptoms may be reduced by pre-medication with an analgesic or a non-steroidal anti-inflammatory and antihistamine, and by slowing the rate of administration.
TRIVIG	IVIG-related Headache	<p>In the absence of an alternative clinical explanation, the patient's signs and symptoms are most consistent with an IVIG-related reaction.</p> <p>Consultation with a Transfusion Medicine Pathologist to discuss options for future transfusions is recommended if these reactions are repetitive, are unresponsive to flow rate changes, or are unresponsive to premedication.</p> <p>Suggest reassessment of the need for IVIG. If necessary, recommend a lower</p>	<ul style="list-style-type: none"> The most common immediate reactions to IVIG are headache, pain at the infusion site and vertigo. Other symptoms may include nausea, fever, arthralgia, rash, palpitations and bronchospasm. Immediate reactions to IVIG are more likely to be infusion rate dependent and may be reduced if



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		dose and /or slower rate of infusion.	the infusion rate is slowed. • The mechanism of most of these reactions is unknown.

* Code is a suggestion, not a requirement