

Adverse Transfusion Reaction – SIGNS AND SYMPTOMS

For all signs and symptoms: **STOP TRANSFUSION IMMEDIATELY!** Maintain IV access with 0.9% sodium chloride.

Type of Reaction	Suspected Transfusion Reaction Signs & Symptoms	Timing of Symptoms	Actions & Suggested Treatment / Investigations
ACUTE (< 24 hours)			
Minor Allergic Reaction	Intensely pruritic localized/or widespread urticaria less than 2/3 of the body; generalized erythema or flushing	During transfusion up to 2-3 hours from start	Consult with Physician–diphenhydramine hydrochloride 25-50 mg PO/IM or IV; proceed with CAUTION
Anaphylactic	Angioedema–localized non-pitting deep edema; upper airway obstruction–laryngeal edema, hoarseness, stridor, ‘lump in the throat;’ lower airway obstruction–bronchospasm, wheeze, chest tightness, dyspnea, cyanosis; profound hypotension	1-45 minutes after start of infusion; majority within 5 minutes	Epinephrine 0.3 - 0.5mg S/C or IV (up to 3 doses); fluid bolus; vasopressors if intractable hypotension; DO NOT RESTART TRANSFUSION
Hypotension	Abrupt onset of clinically significant hypotension–facial flushing with or without mild respiratory symptoms	Within 5 minutes after start of infusion	Supportive therapy; DO NOT RESTART TRANSFUSION
Febrile Non-Hemolytic	Cold sensation, rigors, nausea, vomiting with/without temperature greater than 1°C above baseline.	Usually within 30 minutes after start of infusion; up to one (1) hour after completed	Consult with Physician–Acetaminophen 325-500 mg PO; proceed with CAUTION
Acute Hemolytic (AHTR)	Temperature ≥39°C, hypotension, tachycardia, rigors/chills, anxiety, dyspnea, anemia, hyperbilirubinemia, hemoglobinuria/oliguria, bleeding at IV site, nausea/vomiting, DIC, pain–back/chest/head/flank/abdomen/groin/IV site	Usually within first 15 minutes; up to 24 hours following transfusion.	Serologic testing: group and screen, cross-match, DAT, LDH, BUN, creatinine, TB; IV Fluids DO NOT RESTART TRANSFUSION
Circulatory Overload	Dyspnea, orthopnea, cyanosis, hypoxemia, tachycardia, hypertension, pulmonary/pedal edema, elevated JVP	Within 1-2, up to 6 hours following start of transfusion	Oxygen, diuretics; elevate head of bed. DO NOT RESTART TRANSFUSION
Transfusion Related Acute Lung Injury (TRALI)	Acute respiratory distress, dyspnea, cyanosis, severe hypoxemia, severe bilateral pulmonary edema, bilateral infiltrates on x-ray, hypotension unresponsive to fluid bolus	Within 1-2 hours during transfusion or within 6 hours post-transfusion	Oxygen, intubation and ventilation, vasopressors DO NOT RESTART TRANSFUSION
Bacterial Contamination	Fever, chills, hypotension, shock, nausea/vomiting, tachycardia, hypotension	During or within 4 hours of transfusion	Treatment of shock, DIC, renal failure, product and recipient cultures, antibiotics–broad spectrum initially; anti- <i>pseudomonas</i> if red cells implicated
DELAYED (>24 hours)			
Delayed Hemolytic	Weakness, unexplained fall in post-transfusion hemoglobin, elevated serum bilirubin	Within 3-7 days post-transfusion and up to 21 days post-transfusion	Provide antigen negative blood products for subsequent transfusions
Transfusion Associated Graft Versus Host Disease	Fever, erythematous cutaneous pruritic rash which progresses to generalized erythroderma, watery/bloody diarrhea, pancytopenia, liver dysfunction, anorexia, nausea/vomiting	Within 2-50 days of transfusion (usually 1-2 weeks)	Largely ineffective–Immunosuppressive therapy, cyclosporine/OKT3, cyclophosphamide/antithymocyte, T cell monoclonal antibodies, HPC transplants, irradiated components. Mortality is greater than 90%
Post Transfusion Purpura	Purpura, bleeding, platelet count less than 10x 10 ⁹ /L	1-24 days post transfusion	IVIg