Suspected Blood Component Transfusion Reaction - Adult

**PRESENTING SYMPTOMS**
- Pruritus (itching), facial flushing, urticaria (hives), rash
- Fever, chills, and/or rigors
- Hypotension, respiratory distress, facial/flap/tongue edema, cyanosis, difficulty speaking
- Other signs or symptoms

**INTERVENTIONS**

**STOP transfusion**, call the On-Call Physician/Designee STAT, and stay with patient to monitor symptoms and check vital signs every 5 minutes until symptoms resolve.

- **STOP transfusion**
  - Call the On-Call Physician/Designee STAT
  - Give diphenhydramine 25 mg IV push over 2 minutes
  - Stay with patient to monitor symptoms and check vital signs every 5 minutes
  - Maintain IV access

- **STOP transfusion**
  - Call the On-Call Physician/Designee STAT
  - Stay with patient to monitor symptoms and check vital signs every 5 minutes

- **STOP transfusion**
  - Call the On-Call Physician/Designee STAT
  - Give diphenhydramine 50 mg IV push over 2 minutes
  - Repeat diphenhydramine 50 mg IV push over 2 minutes

- **STOP transfusion**
  - Call the On-Call Physician/Designee STAT
  - Give hydrocortisone 100 mg IV push over 1 minute and
  - Continue to monitor vital signs every 5 minutes

- **STOP transfusion**
  - Call the On-Call Physician/Designee STAT
  - Give diphenhydramine 50 mg IV push over 2 minutes
  - Continue to monitor vital signs every 5 minutes

**Improvement ≤ 30 minutes?**

**Yes**
- Resume blood component transfusion
- Document event in EHR
- Notify Transfusion Services

**No**
- Additional orders per On-Call Physician/Designee
- See Appendix A for Transfusion Reaction Work-up and Reporting

**INTERVENTIONS**

- **Start normal saline IV at 150 mL/hour**
- Give the following:
  - Epinephrine (1 mg/mL) 0.5 mg IM, then
  - Diphenhydramine 50 mg IV push over 2 minutes (if not administered within last 30 minutes), then
  - Hydrocortisone 100 mg IV push over 1 minute

**Evaluation and disposition**
- By On-Call Physician/Designee: re-evaluate need for IV fluids

**DISCLAIMER**
This algorithm should not be used to treat pregnant women.

**NOTE TO PROVIDER**
- Blood components include red blood cells, platelets, fresh frozen plasma, cryoprecipitate, and white blood cells (granulocytes)
- Note to provider: temperature of 39°C or a rise of 2°C and/or any rise in temperature accompanied with moderate/severe systemic signs or symptoms may indicate bacterial contamination
- Note to provider: urticaria or hives may require transfusion work-up only if severe and unresponsive to measures that prevent transfusion from being completed
- Fever is defined as a rise of 1°C or more from baseline temperature and a temperature of ≥ 38°C
- Hypotension defined as a drop in SBP ≥ 30 mmHg and SBP ≤ 80 mmHg
- Respiratory distress may include dyspnea or labored respiration, wheezing, hoarseness/stridor, shortness of breath, hypoxia (O2 saturation ≤ 90% on room air), cough, and/or tachypnea
- Administer epinephrine IM into the antero-lateral mid-third portion of the thigh. Administration via IM route is preferred regardless of platelet count.
- Other signs and symptoms: Abdominal pain/cramps, low back pain and/or flank pain
- Pain - infusion site pain
- Generalized - nausea/vomiting, anxiety, feeling of impending doom, diarrhea, loss of consciousness
- New onset headache occurring during transfusion that requires intervention
- Discoloration of urine (tea, cola, or blood colored)
- Hemolysis/hemorrhage - sudden uncontrolled bleeding
## APPENDIX A: Transfusion Reaction Evaluation and Documentation

### Responsibilities for Nurses
- Notify Attending Physician/Designee
- Notify Transfusion Medicine Physician (TMP) via on-call paging system
- If Transfusion Reaction order panel is activated
  - Complete the Transfusion Reaction Investigation form (Forms On Demand/OnBase)
  - Notify Transfusion Medicine (Blood Bank) at 713-792-8630
  - Obtain appropriate lab tests as ordered
  - Return all remaining blood component(s) and supplies listed below to Transfusion Medicine Service (Blood Bank)
    - Do not remove the administration set from the blood component
    - Return transfusion set, leukocyte reduction filter, and intravenous solution
- Complete Suspected Transfusion Reaction section of Blood Administration flow sheet
- Complete a Safety Intelligence report

### Responsibilities for Providers
- Activate Transfusion Reaction order panel
  - Urinalysis; collect first void for presence of hemoglobin (if hemolysis is suspected)
- Other appropriate laboratory tests
  - Anti-IgA antibodies (for suspected anaphylaxis reactions)
SUGGESTED READINGS


MD Anderson Institutional Policy #CLN1115 Blood Component Administration and Transfusion Reaction Policy

DEVELOPMENT CREDITS

This practice consensus algorithm is based on majority expert opinion of the Adult Blood Product Transfusion Reaction work group at the University of Texas MD Anderson Cancer Center. It was developed using a multidisciplinary approach that included input from the following experts:

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