Adult Hypersensitivity (HSR)/Allergic Reaction Management

Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care. This algorithm should not be used to treat pregnant women.

Any signs or symptoms of blood product hypersensitivity reaction (HSR)/allergic reaction, call On-Call Physician STAT, notify Attending Physician and MERIT Code as appropriate. If a patient is unresponsive at any point, call a “code” as appropriate for your area.

**PRESENTING SYMPTOMS**

- Fever\(^1\), chills, and/or rigors
- Itching, facial flushing, hives (urticaria), rash
- Hypotension\(^2\), wheezing, shortness of breath, facial/lip/tongue swelling
- Other signs or symptoms of HSR/allergic reaction

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**Acetaminophen**

- Given within 4 hours or Stem Cell Transplant patient?

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**Give Acetaminophen**

1,000 mg PO for 1 dose per order set

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**Give Diphenhydramine**

50 mg IV push over 2 minutes

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**Improvement within 5 minutes?**

- Yes
  - Call the Attending or On-Call Physician for additional instructions
- No
  - Give Acetaminophen 1,000 mg PO for 1 dose per order set

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**Hydrocortisone**

- 100 mg IV push over 1 minute
- 50 mg IV push over 2 minutes

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**Epinephrine**

1:1,000 0.5 mL subcutaneously, followed by

- Diphenhydramine 50 mg IV push over 2 minutes (if not administered within last 30 minutes), followed by
- Hydrocortisone 100 mg IV push over 1 minute

**Note:** obtain medications from Pyxis and utilize Order Set/SmartSet

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**Evaluation and disposition by On-Call physician; re-evaluate need for IVF**

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\(^1\) Fever defined as greater than 38.3°C or greater than or equal to 38°C for 1 hour or longer

\(^2\) Hypotension defined as a systolic blood pressure (SBP) less than 90 mmHg or a drop in SBP of more than 20 mmHg from baseline

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**Documentation**

1. Use HSR/Allergy Order Set to document management utilized for an individual patient.
2. Enter as Observed Adverse Drug Reaction (ADR) in Nursing Documentation in OneConnect.

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### Presenting Symptoms

- **Fever**, chills, and/or rigors
- **Itching**, **facial flushing**, **hives** (urticaria), rash
- Hypotension, **wheezing**, **respiratory distress**, **facial/lip/tongue swelling**
- Other signs or symptoms of HSR/allergic reaction

### Management of Blood Product Transfusion Reaction-ADULT

- **STOP blood product transfusion** and monitor vital signs every 5 minutes
- Call the On-Call Physician for instructions

**Yes**

- **STOP blood product transfusion** and monitor vital signs every 5 minutes
- Give **diphenhydramine** 25 mg IV push over 2 minutes
- Continue transfusion
- Monitor vital signs every 5 minutes

**Improvement within 15 minutes?**

**No**

- **STOP blood product transfusion** and monitor vital signs every 5 minutes
- Call the On-Call Physician for instructions

**Additional orders per On-Call Physician**

- See [Page 3](#) for Transfusion Reaction Work-up and Reporting

**Evaluation and disposition by On-Call Physician: re-evaluate need for IVF**

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1. Fever defined as greater than 38.3°C or greater than or equal to 38°C for 1 hour or longer
2. Hypotension defined as a systolic blood pressure (SBP) less than 90 mmHg or a drop in SBP of more than 20 mmHg from baseline
3. Respiratory distress may include, but is not limited to: shortness of breath, hypoxia, dyspnea or labored respiration, wheezing, orthopnea, stridor
4. Other signs and symptoms may include, but are not limited to:
   - Chest pain, tachycardia, tachypnea, hypertension
   - Low back pain and/or flank pain
   - Headache occurring during transfusion
   - Discoloration of urine (tea, cola, or blood colored)

Approved by The Executive Committee of the Medical Staff on 02/27/2018

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Management of Blood Product Transfusion Reaction-ADULT

<table>
<thead>
<tr>
<th>Laboratory tests:</th>
<th>Reporting:</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Anti-IgA antibodies</td>
<td>● Place a Transfusion Medicine consult</td>
</tr>
<tr>
<td>● Urinalysis for presence of hemoglobin</td>
<td>● Complete a Patient Safety Event report</td>
</tr>
<tr>
<td>● Other appropriate laboratory tests</td>
<td>● Complete a Transfusion Reaction Investigation request</td>
</tr>
<tr>
<td></td>
<td>● Return the remaining blood tubing to Blood Bank</td>
</tr>
</tbody>
</table>

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SUGGESTED READINGS


UTMDACC 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 Hypersensitivity 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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