

SOP: Recognition and Management of Transfusion Reactions

This SOP details the **recognition and management of transfusion reactions**, covering identification of symptoms, immediate response protocols, documentation procedures, and post-reaction care. It aims to ensure prompt detection and appropriate handling of adverse transfusion events to enhance patient safety and treatment outcomes.

1. Purpose

To provide step-by-step guidance for recognizing and managing transfusion reactions, thus minimizing risk and ensuring effective treatment of affected patients.

2. Scope

Applicable to all clinical staff involved in the administration of blood and blood components.

3. Responsibilities

- Nursing staff:** Monitor patients during transfusion, recognize symptoms, initiate immediate response, and document events.
- Physicians:** Evaluate, treat the patient, and determine further management.
- Blood bank staff:** Provide technical support and investigate implicated blood products.

4. Definitions

Transfusion Reaction: Any adverse event occurring during or after the transfusion of blood products.

5. Recognition: Signs and Symptoms

| Reaction Type | Common Symptoms |
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| Acute Hemolytic Reaction | Fever, chills, back pain, hemoglobinuria, hypotension, tachycardia |
| Febrile Non-hemolytic Reaction | Fever, chills, headache, malaise |
| Allergic Reaction | Urticaria, rash, itching, anaphylaxis (severe) |
| Transfusion-Related Acute Lung Injury (TRALI) | Acute respiratory distress, hypoxemia, bilateral pulmonary infiltrates |
| Transfusion-Associated Circulatory Overload (TACO) | Dyspnea, orthopnea, cough, hypertension, tachycardia |
| Septic Reaction | High fever, chills, hypotension, nausea, vomiting, shock |

6. Immediate Response Protocols

- Stop the transfusion immediately.**
- Maintain IV access with normal saline, using new tubing.
- Check patient's vital signs; provide supportive care (oxygen, airway support, fluids as needed).
- Notify the attending physician and blood bank immediately.
- Recheck patient identification and blood product details to rule out clerical error.
- Return the implicated blood component, administration set, and patient sample to the blood bank for investigation.
- Treat symptoms as per physician's order (antihistamines, antipyretics, corticosteroids, etc.).

7. Documentation Procedures

- Record onset, nature, and severity of symptoms.
- Document all interventions, medications administered, and vital signs.
- Complete institutional transfusion reaction report forms.
- Ensure notification and reporting to blood bank/transfusion committee and, if indicated, regulatory authorities.

8. Post-Reaction Care & Follow-up

- Monitor patient closely until full recovery or stabilization.
- Arrange for additional laboratory investigations (e.g. direct antiglobulin test, renal and liver function tests, cultures).
- Supportive treatment as per clinical assessment.
- Provide counseling and information to the patient/family about the reaction and future transfusion safety.
- Participate in case review to identify preventable causes and implement corrective actions.

9. References

- Institutional Transfusion Policy
- National Blood Transfusion Guidelines
- WHO: Blood Safety and Availability