



## Risk Factors and Management of Blood Transfusion Complications

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### DESCRIPTION

Patients who have received a blood transfusion frequently have no complications. However, minor to major issues do arise from time to time.

The following are some of the most common blood transfusion problems:

#### Allergic reactions

Even when correct blood type is given, some persons suffer adverse reactions to blood during a transfusion. Hives and itching are common symptoms in these cases. Antihistamines can help for this, as they are most treated for allergic reactions. If the reaction becomes significant, however, a doctor should be consulted.

#### Fever

A fever followed a transfusion is not dangerous. The body's reaction to the white blood cells in transfused blood is a fever. If the patient is also suffering from nausea or chest pain, it could be a symptom of a dangerous response. If any other symptoms or adverse effects occur, patients should consult their doctors.

#### Acute hemolytic immune reaction

An acute immunological hemolytic reaction is a potentially fatal but uncommon reaction in which the patient's body attacks the transfused red blood cells. The attack causes a chemical to be released that destroys the kidneys. Whenever the donor blood isn't a good match for the patient's blood type, this happens frequently. Nausea, fever, chills, chest and lower back pain, and black urine are among symptoms.

#### Blood-borne diseases

- Viruses, bacteria, and parasites are screened and analyzed in all donated blood. However, these agents can infect a patient following a transfusion on rare occasions.

- The chances of contracting a virus or other blood-borne infection through a blood transfusion are virtually nil.
- Every donation of blood is tested for HIV. A one in two million probability of HIV infection in a transfusion recipient exists in donated blood.
- Hepatitis B and C infections. Hepatitis B infection from donated blood is roughly 1 in 300,000. Hepatitis C has a risk of 1 in 1.5 million people.
- The West Nile Virus (WNV). A blood transfusion puts you at a 1 in 350,000 chance of developing West Nile Virus.

#### Immediate management of a suspected transfusion reaction

Each transfusion of blood has a tiny risk of an acute or late adverse reaction.

- Medical officers who prescribe transfusion therapy should carefully choose patients who will benefit from it based on predetermined criteria. In the medical record, note the reason for the transfusion.
- Patients and parents should be informed about any potential side effects.
- When collecting pre-transfusion samples and administering blood, staff should follow hospital procedures and complete all phases in the process.
- Patients should be closely observed, especially in the beginning of a transfusion.
- Any adverse reaction to blood or blood products should be reported as soon as possible to the patient's treating doctor and the hospital blood bank. Because of the potentially fatal nature of severe transfusion reactions, speed is critical.
- The RCH Blood Management Committee reviews reactions, and Serious Reactions are reported to the department of health's Serious Transfusion Incident Reporting (STIR) haemovigilance system.
- All blood product-related occurrences, including wastage, should be documented in VHIMS (not suspected reactions).

The most common transfusion-related acute adverse effects are fever, chills, and urticaria. The most serious reactions include

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acute and delayed haemolytic transfusion reactions, as well as bacterial contamination of blood products. In the early phases of response determining the cause can be challenging. Stopping the transfusion, rerunning of the pre-transfusion checklist, documenting observations, providing urgent patient care, and alerting the treating medical officer are all examples of

immediate patient management. In some cases of moderate urticarial reactions or the emergence of persistent chill- fever reactions in multiply transfused persons, the medical officer may choose to restart the transfusion after examining and treating the patient.