

Figure 10 Acute transfusion reactions

Symptoms/signs of acute transfusion reaction

Fever; chills; tachycardia; hyper- or hypotension; collapse; rigors; flushing; urticaria; bone, muscle, chest and/or abdominal pain; shortness of breath; nausea; generally feeling unwell; respiratory distress

Stop the transfusion and call a doctor

- Measure temperature, pulse, blood pressure, respiratory rate, O₂ saturation
- Check the identity of the recipient with the details on the unit and compatibility label or tag

Febrile non-haemolytic transfusion reaction

- If temperature rise less than 1.5°C, the observations are stable and the patient is otherwise well, give paracetamol
- Restart infusion at slower rate and observe more frequently

Mild fever

Reaction involves mild fever or urticarial rash only

Urticaria

Mild allergic reaction

- Give chlorphenamine 10 mg slowly iv and restart the transfusion at a slower rate and observe more frequently

ABO incompatibility

- Stop transfusion
- Take down unit and giving set
- Return intact to blood bank
- Commence iv saline infusion
- Monitor urine output/catheterise
- Maintain urine output at > 100 ml/hr
- Give furosemide if urine output falls/absent
- Treat any DIC with appropriate blood components
- Inform hospital transfusion department immediately

Yes

Suspected ABO incompatibility

No

No

Severe allergic reaction

Yes

Severe allergic reaction

- Bronchospasm, angioedema, abdominal pain, hypotension
- Stop transfusion
 - Take down unit and giving set
 - Return intact to blood bank along with all other used/unused units
 - Give chlorpheniramine 10 mg slow iv
 - Commence O₂
 - Give salbutamol nebuliser
 - If severe hypotension, give adrenaline (0.5 ml of 1 in 1000 intramuscular)*
 - Clotted sample to transfusion laboratory
 - Saline wash future components (* equivalent to 0.5 mg im)

Haemolytic reaction/bacterial infection of unit

- Stop transfusion
- Take down unit and giving set
- Return intact to blood bank along with all other used/unused units
- Take blood cultures, repeat blood group/crossmatch/FBC, coagulation screen, biochemistry, urinalysis
- Monitor urine output
- Commence broad spectrum antibiotics if suspected bacterial infection
- Commence oxygen and fluid support
- Seek haematological and intensive care advice

Yes

Other haemolytic reaction/bacterial contamination

No

No

Acute dyspnoea/hypotension

Monitor blood gases
Perform CXR
Measure CVP/
pulmonary capillary pressure

Raised CVP

Normal CVP

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- Clinical features of acute LVF with fever and chills
- Discontinue transfusion
- Give 100% oxygen
- Treat as ARDS – ventilate if hypoxia indicates

Fluid overload

- Give oxygen and frusemide 40–80 mg iv