Blood Transfusion

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Processing and testing

--Donated blood is usually subjected to processing after it is collected, to make it suitable for use in specific patient population.

--The World Health Organization recommends that all donated blood be tested for transfusion transmissible infections.

-- HIV, Hepatitis B, C, Trypanosoma cruzi (Chagas Disease) and Plasmodium species (Malaria).

Processing and testing

--All donated blood should also be tested for ABO blood group system to ensure that the patient is receiving compatible blood.

--In some countries platelet products are also tested for bacterial infections due to its higher inclination for contamination due to storage at room temperature. Presence of Cytomegalovirus(CMV) may also be tested because of risk to certain immunocomprised receipients.

-- Leukocyte reduction is the removal of white blood cells by filtration.Leukoreduced blood products are less likely to cause HLA alloimmunization.

Processing and testing

--Pathogen reduction treatment that involves addition of riboflavin with subsequent exposure to UV light has been shown to be effective in inactivating pathogens (viruses, bacteria, parasites and white blood cells) in blood products.

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Adverse Reactions

Blood transfusion exposes patient to a variety of risks and adverse events.

Thus it is vital to continue to improve blood safety and to find ways of reducing transfusion requirements and number of exposures.

Non-Infectious hazards of transfusion

Acute transfusion reactions

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Adverse Reactions

Sever and life threatening reactions

1.Acute haemolytic reactions

2. Transmission of a blood component contaminated by bacteria

3. Sever allergic or anaphylactic reactions

4. Transfusion related acute lung injury

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Adverse Reactions

Less severe acute transfusion reactions

1.Febrile non-hemolytic transfusion reactions

2. Mild allergic reactions

Delayed transfusion reactions

1. Delayed haemolytic transfusion reactions

2. Transfusion associated graft versus host disease

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