仁安醫院
UNION HOSPITAL

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General Information on Blood Transfusion

What is blood transfusion?

Blood transfusion is the process of infusing whole blood or blood components (red blood cells, platelets, plasma) prescribed by your doctor into your veins in order to achieve a therapeutic effect.

Blood supply and safety in Hong Kong have been maintained at a standard similar to most developed countries in Europe and North America. The Hong Kong Red Cross Blood Transfusion Service only collects blood from voluntary non-remunerated donors. Before giving blood, donors are assessed with a health enquiry questionnaire and interviewed about their health and risk factors for diseases. Blood is collected under stringent procedures and then subjected to extensive testing in accordance with well-established international standards. Should your doctor decide that you need a blood transfusion, a blood sample will be taken from you for the hospital blood bank to cross-match for blood that is compatible with your blood group.

Why is blood transfusion necessary?

Depending upon one's clinical conditions, blood transfusions are given to replace blood that has been lost or to correct serious or life-threatening conditions due to low blood counts or deficiency of clotting factor(s). Your doctor will prescribe a blood transfusion according to your clinical condition.

Types of blood components

1. Red blood cells carry the oxygen in your blood to your vital organs. They can alleviate the symptoms of anaemia and bleeding.
2. Platelets can prevent or stop bleeding by forming blood clots at the site of an injury. Platelet transfusion may be required for those who have a low number of platelets or whose platelets do not work efficiently.
3. Plasma is a fluid that contains many substances including the clotting factors that help blood to clot.

Risks of receiving blood transfusion

Below is a list of transfusion related risks for your reference:

1. Allergy
   This is usually a mild reaction (e.g. skin rash and itching) and is easily controlled with drugs. Severe allergic reactions are very rare (less than 1 in 100,000). It may, however, be life-threatening in rare circumstances.

2. Haemolysis
   If the donor and your blood groups are mismatched, the donor red cells will be destroyed by your body after infusing into your body. This reaction is called haemolysis. Severe haemolytic reaction is exceptionally rare, at an incidence of less than 1 in 100,000. However, it can result in kidney failure and other serious complications that may be life-threatening. The hospital blood bank will ensure that the correct blood is given to the recipient by meticulous testing.

3. Fever
   Some patients may have headache, chills and fever during or shortly after blood transfusion. It will often subside without any consequences.

4. Transfusion Transmitted Infections

The risk of transfusion-transmitted infection cannot be eliminated entirely by the testing technology that is currently available. Below is the estimated residual risk of the virus in a blood product:

- HIV – less than 1 in 10,000,000
- Hepatitis C – less than 1 in 10,000,000
- Hepatitis B – approximately 1 in 115,000

The residual risk of bacterial contamination in a red blood cell product that may cause serious transfusion-associated complications is estimated to be 1 in 500,000, and 1 in 10,000 in a platelet concentrate product.

It is not feasible to generalize the exact risk of every infection for any patient receiving a blood transfusion as there are many variable factors would affect the risk estimation, such as the immune / infection status of the patient, the quantity of blood transfused, etc.

5. Others

Transfusion-related acute lung injury (TRALI) is rarely seen in Chinese.

Risks of not having a transfusion

The purpose of giving blood transfusion to you is to replenish the blood or blood component(s) you need. Red blood cells carry the oxygen in your blood to your vital organs, such as the brain and heart. A decrease in oxygen can result in damage to these organs. If you have a low platelet count or a deficiency in clotting factor, you are at a higher chance of bleeding. In some cases, this can result in serious major organ damage. Transfusion may be needed to prevent such damage.

Should there be any enquiries or concerns, please consult the attending doctor.

Under the professional care of the doctor, you will gradually recover. We wish you all the best during your treatment and recovery.

If you have any questions after reading the entire leaflet, please write them down in the spaces provided in order for the doctor to further follow-up.

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Compiled by Union Hospital Operating Theatre (OT) Governance Committee

The above information is for reference only, please enquire your physician for details
Our Hospital reserves the RIGHT to amend any information in this leaflet without prior notification