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NETCARE UNITED KINGDOM

NHS Treatment Centre

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What You Need To Know About A Blood Transfusion

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This booklet is designed to provide you, the patient, with information and advice regarding your surgery at the Greater Manchester Surgical Centre (GMSC). Please take the time to read the information in this booklet as it will answer many of the questions you may have about your forthcoming surgery.

If you still have any questions after reading through the booklet, please do not hesitate to phone the GMSC Advice Line on 0161 746 2828 where our staff will be more than happy to address any of your queries. You may also access further information on our website at www.netcareuk.com

IMPORTANT: At the time of going to print, the information contained within this booklet was deemed to be accurate.

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1. Introduction

Blood is a very precious resource and is therefore used only when absolutely necessary. Small amounts of blood loss can be replaced by intravenous fluid via a drip in your vein. However, large amounts of blood which is lost during illness, trauma, or during certain surgical procedures may necessitate a blood transfusion which will replace the red blood cells you have lost through bleeding. Red blood cells play an important role because they transport oxygen to all the tissues in your body. Oxygen is vital for the healthy and effective functioning of the tissues and without it, tissues will become damaged and die.

Although the surgeon takes every possible precaution to minimise and prevent the use of donated blood (known as homologous blood), there is always the possibility that complications may arise as a result of a blood transfusion. The risks associated with a transfusion must always be balanced with any potential risks to your health if you do not receive a blood transfusion.

All blood donors in the UK are carefully checked and screened before each donation. The blood is individually tested using the highest standards. The objective of these tests is to detect any infections that may be carried in the blood such as Hepatitis B and C and HIV, the virus that causes AIDS. In the UK, the current risk of contracting an infection via a blood transfusion is very low.

2. Indications for Transfusions

- A blood test measuring your haemoglobin (Hb) will be taken. The Hb is the oxygenated component of your blood. A blood transfusion will be considered if your Hb is 8 or lower. Normal Hb levels are between 12 – 14 for a female and between 14 – 16 for a male.
- You lose more than 20 percent of your blood, ie. four cups.
- You are anaemic (anaemia) and there is medical concern about your body's oxygen carrying capacity.
- Your platelet or clotting factors are low or are not functioning correctly.
- You have other existing medical conditions such as cardiac and respiratory disease which may necessitate a higher haemoglobin level than usual.

After obtaining a comprensive overview of your medical history, your doctor will gauge the likelihood and necessity of a blood transfusion, which may be required to see you safely through your surgery.

3. Procedure for a Blood Transfusion

Prior to being taken to the operating theatre, blood will drawn from you for cross-matching purposes (your blood type is matched to a similar type of blood).

Before a blood transfusion is carried out on you or your dependents, you must be given all the information about the benefits, risks and alternatives involved with the procedure. You must also be given adequate time to mull over this information and, if after caferful evaluation, you have made a decision to proceed, you will need to sign a consent form agreeing to the transfusion. Giving your permission for the procedure is known as informed consent.
After your surgery has been performed, another blood test (an Hb) is done to test

After your surgery has been performed, another blood test (an Hb) is done to test whether you have lost a lot of blood in the theatre. If this is the case, then the correct blood type will be ordered from the blood bank.

When the unit of blood arrives, it is checked by two individuals, one of whom is a registered nurse. The transfusion is then carried out, with each unit of blood usually being infused over four hours.

While undergoing a blood transfusion, regular observations will be conducted to ensure that you are not experiencing any reactions.

4. Risks

4.1 Infectious risks of transfusion

Blood is collected from healthy volunteer donors who are all carefully screened for infectious diseases. Each unit of blood is tested for viruses that cause various diseases such as Hepatitis B, Hepatitis C, and HIV. However, there is still a risk that the infection may not be detected in routine screening / testing.

4.2 Non-infectious risks of transfusion

While much attention has been focused on the infectious risks of blood transfusion, the greatest risk comes from non-infectious causes. Various factors including clerical errors, the age of donated blood, and the amount and speed at which blood units are transfused, can lead to many potentially major complications including:

A haemolytic reaction. Sometimes, there is an incompatibility between donor blood and the recipient's blood. This can cause a breakdown of red blood cells in the recipient. The doctor will use a testing method before the transfusion (cross-matching) to ensure that this does not take place. Despite this, various factors including clerical error have led to incompatible blood units being transfused.

In non-haemolytic reactions, feverish or itchy reactions occur in up to one percent of transfusions. These reactions are due to the presence of trace proteins such as white blood cells (WBC) and platelets in the unit of red blood cells. Usually, these reactions can be treated and the transfusion is continued.

Immunomodulation. Some studies have suggested that blood transfusions may increase the chances of infection or the occurrence of a malignancy by altering the recipient's immune system. While such studies are inconclusive, the introduction of leukocyte-reducing filters may be protective.

Aging donor blood. Red blood cells can be kept in refrigerated storage for up to 35 days. However, over this time, changes in the potassium levels and in the binding process of oxygen to haemoglobin may take place. This can affect the ability of the red blood cells to release oxygen once transfused, an important reason to replace haemoglobin using a blood transfusion. However, the blood transfusion can also increase potassium levels, which can be associated with

However, the blood transfusion can also increase potassium levels, which can be associated with cardiac complications, including palpitations, and in extreme cases, cardiac arrest (heart failure).

Massive Transfusion. This may be defined as significant bleeding as seen in trauma and some surgeries, where 10 or more units of red blood cells have been transfused within 24 hours. Massive transfusion of red blood cells and other fluids causes a dilution of platelets and clotting factors and may result in further blood loss.

5. GMSC Advice Line

The staff at the Greater Manchester Surgical Centre (GMSC) are available to assist you at any time. You can reach them by calling: 0161 746 2828.

6. About Netcare and the NHS Partnership

6.1 Netcare

Network Healthcare Holdings Limited (Netcare) is one of the largest integrated private healthcare organisations in South Africa.

Listed on the Johannesburg Securities Exchange (JSE) in 1996, the Netcare group owns and manages 45 private hospitals and clinics, 61 specialised medical centres and 53 Medicross Family Medical and Dental Centres throughout South Africa.

In total, Netcare hospitals comprise 7 200 beds, 319 operating theatres – all of

In total, Netcare hospitals comprise 7 200 beds, 319 operating theatres – all of which are supported by over 2 200 medical practitioners in private practice. Collectively, over 4.8 million patients a year are cared for in medical facilities within the Netcare group.

Specialised hubs of clinical excellence focusing on disciplines such as cardiology, cardiothoracic surgery, neurosurgery, orthopaedic surgery, gastroenterology, oncology, ophthalmology, renal dialysis and organ transplantation are situated in numerous Netcare hospitals.

6.2 The Netcare/NHS Treatment Centre Partnership

During the past two years, Netcare has participated in four successful NHS Waiting List Initiatives which were specific to ophthalmology; orthopaedic surgery; and ear, nose and throat surgery.

Committed to reducing waiting times for NHS patients needing surgical procedures and to improving choice and access to facilities; in 2003, the NHS launched its Treatment Centre (TC) initiative, a programme designed to provide rapid, safe and effective medical treatment to those on Waiting Lists.

Against the backdrop of its previous experience with NHS Waiting List Initiatives, Netcare was selected as the successful bidder for two such five-year TC initiatives; the first of which is based on a mobile ophthalmology chain that will perform 44 000 cataract procedures over five years. The second TC initiative will see 45 000 orthopaedic and general surgery procedures performed at the newly-constructed Greater Manchester Surgical Centre (GMSC) over the five-year period.

The Netcare/NHS partnership upholds the NHS' principle of delivering excellent

The Netcare/NHS partnership upholds the NHS' principle of delivering excellent service free at the point of access. Providing the highest possible quality of care while maintaining patient dignity at all times, is a fundamental objective of the partnership.

Netcare's medical team consists of highly skilled, experienced and professionally qualified consultant surgeons, anaesthetists and nursing personnel, all of whom are supported by administrative, technological and patient care teams.

We dedicate our efforts to providing you with quality care in a safe, efficient and caring environment.