Lipidapheresis

Introduction

This leaflet provides information about a procedure called lipidapheresis. It explains what the procedure involves and describes the benefits and possible risks. You will have the opportunity to discuss with your doctor the reasons why you need lipidapheresis and how it might help. Please read it and if you have any questions discuss this with the doctor or nurse looking after you.

What are lipids?

Lipids are fats found in your blood there are 2 types of lipids: cholesterol and triglycerides. Total cholesterol is the amount of all cholesterol in the blood. Not all lipoprotein fractions are harmful. High levels of low-density lipoprotein cholesterol (LDL-C) are a risk factor for cardio vascular disease (CVD) because LDL-C sticks to your blood vessels. High levels of high-density lipoprotein cholesterol (HDL-C) have a protective effect as they prevent cholesterol from sticking to your blood vessels. Low levels of HDL-C are a risk factor. Triglycerides are fat your body stores for energy for use later on. Lipidapheresis is used in a condition called familial hypercholesterolemia

Why is lipidapheresis needed?

Lipidapheresis will remove high levels of harmful LDL cholesterol in the blood. This will reduce the risk factors for cardio vascular disease.

What is lipidapheresis?

Lipidapheresis is a method of removing lipids using a special machine, separator and an adsorber column. The plasma separator separates your plasma from whole blood. The plasma is then passed through an adsorber this retains the lipids which is then discarded. The plasma is then returned back to you. It is a therapy used in combination with lipid lowering drugs and life style modifications such as smoking cessation, diet, weight and exercise.

How many lipidapherisis treatment will I need?

This will depend on your lipid levels the aim is to get your lipid level as low as possible. Your doctor will explain the procedure and make a treatment timetable with you. The treatment timetable will be tailored around your lipid levels and other commitments.

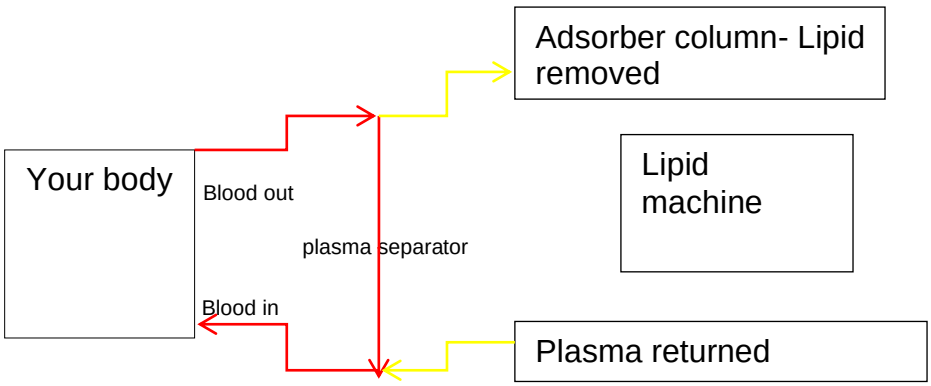
What happens during lipidapheresis?

In order for us to carry out lipidapheresis you will have an arterio venous fistula (AVF) formed which is the preferred form of access used to provide treatment. This is made during a surgical procedure. For more information about the fistula, Please see the leaflet ”Having a fistula for haemodialysis”

This may not be possible for some patients and you may have a line (central venous access device) inserted in one of the veins in your neck (sometimes also called a haemodialysis line). For more information about the central venous access device, (CVAD) please see the leaflet "Having a haemodialysis line"

Lipidapheresis will be carried out on Ward 301 by specially trained nurses who will monitor and look after you throughout the procedure. Before the procedure starts special blood tests will be taken and you will be able to go home afterwards.

Sterile tubing set is used to pump your blood around a machine, through a special separator to separate plasma from the blood. As the lipids are carried within plasma the plasma is passed through an adsorption column to remove the lipids. The plasma and blood is then returned back to you.



During the procedure several drugs are used. Heparin is used to prevent blood from clotting in the circuit and the filter. Citrate is used to prevent clots in the adsorber column. Calcium gluconate is used to counteract the side effect of citrate. Saline is used to prime the circuit and flush the adsorber column.

How long does the procedure take?

Lipidapheresis takes about 3-4 hours and you will need to be attached to the machine until the procedure is finished. You may want to bring something to read or occupy yourself with. You will be able to eat and drink normally during the procedure.

Are there any risks associated with lipidapherisis?

The most frequently encountered complication of lipidapheresis is an allergic reaction to the adsorption column. Medication may be given before the procedure to minimise this risk.

Other possible side effects during the treatment include dizziness, nausea, feeling cold or you may experience a tingling sensation in your fingers and lips. This could be due to the calcium levels in your blood being too low. However, the nurse looking after you will be checking your levels during and after the procedure. The nurse will also be checking your blood pressure, pulse and temperature throughout the procedure.

There is also an increased risk of infection if you have a line (CVAD). It is important that your line is kept free from germs at all times. To reduce the risk of infection we use special protective dressings to cover the exit site and sterile gauze to wrap the line ends as well as putting an antibacterial solution into the line itself. Keep the protective dressing on at all times and do not remove it. The nurses will look after the dressing for you when you have your treatment.

Other ways to help reduce the risk of infection are to avoid close contact with people who have coughs, colds, diarrhoea or vomiting. If you experience any of the following please let your doctor or nurse know as soon as possible as it may indicate severe infection:

- Feeling hot and having a temperature above normal
- Feeling shivery, shaky and generally unwell
- Redness, swelling or oozing around the line

You must contact the Renal Assessment Unit immediately. The opening hours are 08:00-20:00 Monday - Friday and 08:00-16:00 at weekends. If this occurs outside normal working hours, then contact the on call renal registrar at the Queen Elizabeth Hospital Birmingham via switchboard.

Where can I find further sources of information?

Further information can be obtained from:

NHS Choices	www.nhs.uk
British Heart Foundation	www.bhf.org.uk

Useful numbers

Ward 301 Acutes	0121 371 3096
Queen Elizabeth Hospital Birmingham	0121 371 2000