

STUDENT PACK

MENTOR:

STUDENT:

DATE:

CLINICAL INVESTIGATION UNIT CDH

Welcome to the Clinical Investigation Unit CDH. We are a nurse led outpatient clinic; providing none surgical treatments as a day treatment service.

The clinic provides treatments for patients with a variety of conditions. Throughout this placement you will be given the opportunity to research and gain knowledge of many type of conditions that are treated, monitored and managed on CIU.

Below is a overview of treatments and tests that the clinic provides:

BLOOD TRANSFUSION

A blood transfusion is a common procedure in which patients receive blood through an intravenous (IV) line for patients with severe anaemia or blood loss. Observations must be completed pre transfusion, 15 minutes post transfusion and at the end of the transfusion.

Blood transfusions are common at CIU. There are many reasons why patients require a blood transfusion. It could be due to haematology conditions, pre surgery requirement or oncology requests. A blood transfusion takes between 2-4 hours to complete unless stated otherwise by a doctor.

The most common blood types are: A, B, AB, O, Rh-Positive or Rh-Negative.

The blood used for transfusion must be compatible with the blood group of the patient. Otherwise, antibodies (proteins) in the blood attack the new blood which makes the patient severely unwell resulting in a blood transfusion associated reaction which can result in death. Approximately 40% of the population have type O blood. Type O Rh –ve blood is used for emergencies, when there is insufficient time to test a patient's blood type. People who have this blood group are called Universal donors. . People who have type AB blood are called Universal recipients. This means they can receive any type of blood.

CROSS MATCHING/ GROUP AND SAVE

All patients requiring a blood transfusion will need to have a valid group and save or a cross match. A cross match is a blood test which ensures the donor's blood is compatible with the blood of the intended recipient. Compatibility is determined by pathology in which they check the cross match to determine the blood group ABO and Rh as well as testing for the presence of any antibodies. If a patient has had a blood transfusion within the last three months the cross match will only be valid for 72 hours.

PLATELET INFUSIONS

A platelet infusion is used to treat people who have abnormally low levels of platelet cells in their blood. This is known as Thrombocytopenia.

A low platelet count will mean the patient is at risk of excessive bleeding, either through a minor accident, cut or graze; or as a result of surgery or dental work.

Causes of Thrombocytopenia that may need treatment with platelet infusions are:

- Types of Cancers such as Leukaemia or Lymphoma
- Chemotherapy or bone marrow transplants, which reduces the production of platelets
- Chronic Liver disease or Cirrhosis (scarring of the liver, which has many causes, such as alcohol abuse)
- Sepsis or severe infection. This can cause abnormal clotting and low platelets

FERINJECT INFUSIONS

Ferinject is an Iron replacement product indicated for the treatment of Iron deficiency Anaemia. It is given intravenously and the dosage is dependent on the patient's Haemoglobin level (HB), Iron level and weight.

Most patients are referred for IV Iron therapy when they are unable to tolerate oral Iron medication. You cannot give more than 1000mg of Ferinject in one week. It is given in 100 or 250mls normal saline over 15 minutes. Patients are asked to wait 30 minutes post infusion for observation of any type of reaction before being discharged.

VENESECTIONS

Venesections are similar to donating blood but the blood is harvested for medical reasons.

The two conditions treated with venesections are Haemochromatosis and Polycythaemia.

Haemochromatosis is a hereditary condition which results in an iron overload leading to damage of vital organs, especially the liver if untreated. The patient's haemoglobin (HB) is monitored to make sure the patient does not become anaemic during the course of treatment. The ferritin and iron stores are also monitored to stay within normal parameters. The protocol for haemochromatosis states that we should aim for a ferritin level of 50. However, this set as directed by the consultant. This may also vary with different trusts.

Polycythaemia is a type of blood cancer and is an overproduction of red blood cells. The patient's haemoglobin (HB) and haematocrit (Hct) are monitored due to the high level and thickness of red cells. Patients are at risk of developing blood clots if untreated and can be fatal. The protocol for polycythaemia states that we should aim for a haematocrit reading of 0.45 or less to maintain stability, unless directed by the consultant.

INFLIXIMAB INFUSIONS

Infliximab is a monoclonal antibody used to treat Ulcerative Colitis and Crohns disease, which are the two main types of inflammatory bowel disease (IBD).

Infliximab is given intravenously (IV) and the dosage is weight dependent. We need to ensure the patient is free from infection. Infliximab reduces the body's over reaction in the bowel that can cause chronic inflammation. The infusion is given over a 1-2 hour period and the same rest period post infusion to observe for reactions.

VEDOLIZUMAB INFUSIONS

This medication is a monoclonal antibody and is used to treat moderate to severe ulcerative colitis in patients who are intolerant to or have had inadequate results to other forms of medication. Vedolizumab is given intravenously (IV) over 30 minutes. The patient then waits for 1–2 hours post infusion to observe for reactions.

IMMUNOGLOBULIN INFUSIONS

This infusion belongs to a class of medicines called human normal immunoglobulins. These are also known as antibodies and are blood proteins which help your body to fight infections. This medication can be used as a replacement therapy to increase low immunoglobulin levels or as a treatment for inflammatory disorders, or to increase platelets prior to surgery for patients with thrombocytopenias.

INTERNATIONAL NORMALISING RATIO (INR)

Patients attend CIU for an INR check. This is a finger prick or blood test. The normal therapeutic INR range should be 2-3. Patients will attend with us until they are in the therapeutic range then attend anticoagulant clinic. Most people who attend for an INR check come as a result of a having a pulmonary embolism, deep vein thrombosis, atrial fibrillation or mechanical heart valve. These patients need a medication called warfarin or less often Synthrome which decreases the rate at which blood clots in the body. The risk of bleeding is increased, so careful monitoring is required.

ENDOCRINE TESTS

- Short Synacthen test (SST)
- Water deprivation test
- Glucose tolerance test
- Insulin tolerance test
- Glucagon stimulation test
- Growth hormone day curve
- Cortisol day curve
- Dexamethasone suppression test
- Arginine stimulation test

These tests will be explained in detail by staff nurses on CIU or the endocrine specialist nurse.

INTRAVENOUS ANTIBIOTICS

The clinic provides an outpatient antimicrobial therapy (OPAT) service. This service prevents patients having to remain in hospital for extended iv antibiotics. These patients are required to come daily for IV antibiotics but as an outpatient. The patients are reviewed by the microbiology team on a regular basis. The patients are usually referred from the wards within the hospital, or from A+E or urgent care services this helps reduce the number of beds being used and gives the patient more independence. If the patients require long term antibiotics they may have a peripherally central inserted catheter (PICC) line in situ.

A PICC line is a long, slender, small flexible tube that is inserted into a peripheral vein, usually in the upper arm and advanced until the catheter tip terminates in a large vein near the heart to obtain venous access. A PICC line can be used for a prolonged period of time and can be in situ up to a year. The insertion of a PICC line is done using ultrasound by a specialised trained nurse from the Central Venous Access Team (CVAT). There are different types of venous access that you will become familiar with on the unit.

CIU use the following Devices for venous access;

Cannulation

Porta cath

Central lines

Picc lines

Midline catheters

POTENTIAL SPOKE PLACEMENTS

IBD specialist nurses

CVAT

OPAT Specialist nurse

Endoscopy

Haematology specialist nurse

Pathology Lab

Blood track training

Anticoagulant clinic

Tissue viability

Infection control

Medications used regularly on Clinical Investigation Unit

Drug	What is it?	What is it used for?	Route	Dose	Side effects	Contraindications
Ferinject						
Paracetamol						
Piriton						
Hydrocortisone						
Teicoplanin						
Furosemide						
Immunoglobulins						
Infliximab						
Ceftriaxone						

Synacthen						
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Common Conditions treated/monitored at the Clinical Investigation Unit

Condition	Signs & Symptoms	Diagnosis	Treatment
Myelodysplasia			
Crohn's disease			
Haemochromatosis			
Cellulitis			
Polycythaemia			
Bronchiectasis			
Ulcerative colitis			
Leukaemia			

WORKING HOURS

Monday – Friday	0800 -1700
Saturday –Sunday	08:00 – 1300
Telephone	01257 245583

STAFF

Matron Heather Grice 01772 524059

Manager Rachel Hinchcliffe

Sister Rosie Martland

SN Maureen Musk

SN Nicola White

SN Rosie Martland

SN Mary Boyle

SN Nicola Welch

HCA Susan Roe

Ward Clerk: Bev Bretherton

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