

## Patient information

### Rituximab Use In Haematology

#### Haematology Liverpool

#### What is Rituximab?

Rituximab is from new group of biological drugs, known as monoclonal antibodies. It works by removing a type of blood cell called a “B” cell, which is involved in the making of antibodies.

#### What is the Immune system?

The immune system makes antibodies and immune cells, which are in the blood to help your body to fight infections. In certain illnesses the immune system becomes too active and fights the person’s own body instead of helping to protect it. These kinds of diseases are called auto-immune diseases. Examples of an auto-immune blood disorders are Immune Thrombocytopenic Purpura (ITP), Thrombocytopenic Purpura (TTP), Autoimmune Haemolytic Anaemia (AIHA) and Acquired Haemophilia.

#### How does rituximab work?

B cells are a type of white blood cell found in your blood and are involved in making the antibodies which are causing your illness. Rituximab works by removing these B cells from the blood for several months. After this time, levels will slowly return to normal. Clinical trials have shown that following the removal of B cells there is an improvement in certain auto-immune diseases.

#### What are the benefits of having rituximab?

In some blood conditions there is abnormal activity of the immune system producing autoantibodies from “B” cells. Rituximab should switch off the production of these autoantibodies from B cells.

#### What are the risks of having rituximab?

As with all treatments, there are side effects associated with rituximab and some of these are more common. Everyone experiences side effects differently and many patients have received rituximab and serious side-effects have been rare. For the great majority of patients, rituximab is safe and well tolerated. Some undesirable effects have been recorded after administration of rituximab. Most are mild, but there are some more serious complications, which fortunately are rare. The adverse effects recorded include:

## **Infusion reactions**

A small proportion of people can develop fever, wheeziness, rash, fall in blood pressure, chills and shivering during their infusion. If you develop any symptoms during the infusion you should tell the person giving the infusion straight away, because it may be necessary to slow down the rate of the infusion.

## **Blood abnormalities**

Rituximab may rarely cause abnormalities of your blood and affect liver function. Blood tests will be done before each infusion.

## **Infection**

There is an increased risk of infections after rituximab. However, if infections do develop they may be more severe. One specific infection that you may be at increased risk of is PCP which is a respiratory infection, to reduce your risk you will receive a prescription for Co-trimoxazole 480mg once daily. This is an antibiotic to reduce your risk of PCP and you should take this from your first day of rituximab and for 90 days after your last dose of rituximab. You will also be screened for Hepatitis before starting treatment as rituximab may reactivate previous viruses.

## **Other side effects**

Itching of the skin, sickness, tiredness, headache, breathing difficulties, sensation of the tongue or throat swelling, itchy runny nose, flushing, irregular heart rate, difficulty in sleeping, pain in muscles and joints, pain at the infusion site, anxiety, dizziness, tingling or numbness in hands or feet, sweating, abnormal taste, cough, reactivation of viral infections (eg cold sores), heart problems.

**Progressive multifocal leukoencephalopathy**-In very, very rare cases patients who have been treated with Rituximab have developed a disease of the brain and spinal cord called progressive multifocal leukoencephalopathy (PML). This is caused by a virus. If you experience memory loss, trouble thinking, difficulty walking and/or loss of vision please contact your doctor or nurse immediately. This has only been seen following prolonged use of Rituximab.

**If you are worried about any of these risks, please speak to your Consultant or a member of their team.**

## **Other things to be aware of during treatment with Rituximab**

### **Contraception**

We do not yet know if it is harmful to a baby if conceived during treatment with Rituximab. Effective contraception must be used while on Rituximab. For female patients we would generally recommend a gap of twelve months between having Rituximab and trying for a baby.

**Breast feeding**-Do not breast feed while on Rituximab. No one knows whether Rituximab could pass into the breast milk or if it would harm the baby.

**Immunisations**-If immunisations are needed they should be given before treatment with rituximab. Live vaccines should be avoided.

## **Before treatment with rituximab**

Tell your doctor about any medicines you are taking, including over-the-counter drugs. Rituximab can interfere with the blood thinning drug Warfarin. Complimentary therapies and herbal drugs can be harmful to you when you are having Rituximab.

You will have blood tests prior to your treatment to monitor your full blood count (FBC), along with tests for Hepatitis and other viruses.

As the dose of Rituximab is based on your weight, you will have your height and weight measured prior to treatment.

## **How is rituximab given?**

Rituximab is given through a drip (intravenously) through a fine tube (cannula) inserted into a vein. The infusion runs over several hours but the rate can be increased if you tolerate the infusion.

You will be given medicines to reduce the likelihood of a fever or reaction at each infusion. This will include steroid, Paracetamol and Chlorphenamine (an antihistamine) – do **not** take these at home before you come in for your infusion.

During the infusion the nurses looking after you will be monitoring your blood pressure and heart rate closely. If these are stable the rate can increase.

Rituximab is usually administered once weekly for four weeks (when not combined with plasma exchange) however this can be increased to six to eight weeks if required. In an acute episode of TTP, Rituximab can also be given as two doses per week (when combined with plasma exchange) your doctor will explain how many doses you require.

## **Going home after your infusion**

After the infusion is completed the cannula will be removed and you will be able to go home. We do not advise that you drive home after the infusion.

## **Following treatment with rituximab**

You may have a reduced resistance to infection.

If you become unwell or develop; a temperature above 38<sup>0</sup>c; coldness or shivering; any unexplained bruising or bleeding; severe diarrhoea; unrelieved shortness of breath; mouth ulcers that stop you eating or drinking, please contact the Specialist nurse. You can drink alcohol whilst on Rituximab but keep within the recommended limits.

## **Do I need any special checks while on rituximab?**

You will have a physical examination and your blood tests checked before the first infusion. A doctor will see you at the end of each infusion to make sure you are okay and are well enough to go home. Clinic appointments and blood tests will be arranged for one week after each dose. If necessary, any changes to your medication will be made. The usual blood tests to monitor your disease will be taken, and your B cell counts (CD20) taken monthly for six months and then every two months thereafter.

## What will happen if I decide not to have treatment?

If you decide not to have Rituximab following advice, then a plan of alternative treatments will be discussed with you by your consultant. Where there are contraindications to treatment, alternative treatment options will be discussed.

If you have any further questions or wish to discuss alternative treatment then please ask a member of your medical / nursing team.

## Feedback

Your feedback is important to us and helps us influence care in the future.

Following your discharge from hospital or attendance at your outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your co-operation is greatly appreciated.

## Further information

**If you have any questions or queries, please contact Haematology Liverpool.**

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