

Ruthenium plaque treatment

Information for patients Ophthalmology (Oncology)

What is ruthenium plaque treatment?

This is a treatment whereby a plaque is surgically placed over the tumour in your eye. The plaque is made of a radioactive isotope of Ruthenium. These plaques are available in different sizes. This means the correct size can be used for each individual patient, minimising damage to the retina.



Both sides of the plaque are coated with a layer of silver. This is slightly thicker on the outside to prevent radiation escaping and thus preventing damage to the tissue surrounding the eye. The inside layer has a thin coating of silver to allow the radiation to penetrate and destroy the tumour below. When the plaque has been removed it will be sterilised and can be used again for approximately a year.

How does the treatment work?

The radioactivity of the plaque stops the tumour cells dividing and starves the tumour by destroying its blood supply. This eventually causes a reduction in the size of the tumour.

Why has this treatment been chosen for me?

Ruthenium plaque treatment is often chosen over other types of radiation treatment because it tends to have fewer side effects and therefore causes less damage to your vision. It is a treatment that is only used in cases where:

- The tumour is in a position in the eye that allows it to be covered by the radioactive plaque
- The tumour is a relatively small one

Occasionally it may be necessary to have laser treatment as well.

How will having this treatment help me?

For 90% of the patients who have this treatment it successfully destroys the tumour in their eye.

What are the risks involved in this treatment?

Whenever radiation is used as a treatment there is always some risk. However, we will always take steps to ensure any risk is lessened as far as possible. Despite these steps there is always the risk of complications occurring which can include:

- **Loss of vision** - the amount of vision loss you have will depend on the size and location of the tumour. Your ophthalmologist will discuss this with you before your treatment.
- **Cataracts** - some people do develop cataracts after this type of treatment.
- **Vitreous haemorrhage** - this is where you get bleeding into the jelly-like substance inside your eye. This usually clears up without treatment. However, it is sometimes necessary to treat the damaged area of the retina causing the bleeding with several episodes of laser treatment.
- **Retinal detachment** - may cause a visual disturbance. If you experience sudden loss of vision, a painful eye or if irritation becomes a problem, please let us know (contact details are at the end of this leaflet).

Other complications can arise that are not connected with radiation but are the result of the surgery, these are:

- **Inflammation of the eye** - the white of the eye may look very red and the eye may be painful. You may also get pain above the eye and in the side of your face. This can happen either straight after treatment or several weeks or months later.
- **Infection** - the eye may become itchy, hot and swollen, it may also have a yellow or green discharge.
- **Irritation (foreign body sensation)** - usually from a suture (stitch), the eye may feel prickly and sometimes become sore. Any irritation should gradually subside as the sutures dissolve.
- **Double vision** - this may occur immediately following surgery, but usually resolves within 6 to 8 weeks. If symptoms persist corrective surgical intervention may be necessary.
- **Dry eye** - this may occur sometime after treatment, artificial tears will usually make your eye more comfortable.

We will discuss these possible side effects / complications with you before you have any treatment.

What happens before the operation?

Prior to coming into hospital you will have to have a general anaesthetic assessment, usually this will be carried out at your first outpatient appointment once you have seen the consultant and support sister.

You will meet one of the nurses in the assessment team who will:

- Assess your general health
- Arrange for you to have an ECG, chest X-Ray and blood tests
- Discuss your current medication and advise you if you have to omit any tablets prior to surgery
- Advise you on starving prior to your operation
- Confirm the date and time of your admission
- You will also require an abdominal ultrasound scan which we will try to organise for the same day, if not you will be required to attend the day before your operation.

What happens on the day of my operation?

On the day of your operation you will:

- Be admitted to the day case unit at the Royal Hallamshire Hospital, and from theatre you will be taken to ward I1 for the remainder of your stay.
- Have nothing to eat for 6 hours before your operation.
- Have nothing to drink for 4 hours before your operation
- Have dilating drops put into the eye that we are going to treat, approximately 1 hour prior to your operation. At about the same time, we may also give you some pre-medication.

What does the operation involve?

Ruthenium plaques are inserted surgically and to do this, your surgeon will:

- Retract the eyelids so that the plaque can be positioned over the tumour. The retraction of the eyelids may cause bruising and swelling following surgery.
- Darken the theatre and look through the dilated pupil using a special piece of equipment called an indirect ophthalmoscope. A bright light is then shone into your eye, this will cast a shadow where the tumour is and the surgeon will outline the tumour with a special marker pen.
- Place a 'dummy' plaque over the marked outline of the tumour and check that the plaque covers the whole tumour. Once they are sure the tumour is covered, your surgeon will replace the dummy plaque with the Ruthenium one, which they will stitch into position.
- Finally release your eyelids and place an eye patch and shield over the eye.

How long will the plaque have to stay in?

This will depend on the radioactivity of the plaque and the size and position of the tumour. In general plaques are in place from 1 to 6 days.

What happens after my operation?

After your operation you will be taken back to the ward and nursed in a side room, this is so that we can protect other people from the plaque radioactivity. For the first 4 hours on the ward you will have regular blood pressure and pulse checks. The nurses will bathe your eye every 4 hours and put in some antibiotic ointment and an anti-inflammatory eye drop.

How will I feel after my operation?

As the anaesthetic wears off, you may feel some nausea and pain. Your nurse can give you something to help with this so please ask if you get either of these problems. You may also find that:

- Your eye will feel sore and bruised. The soreness, bruising and swelling will usually take a couple of weeks to heal, you will be given ice packs to help with this (you can continue to use ice packs at home).
- Your eye feels itchy and weeps clear tears for a couple of weeks after the surgery.
- You may feel quite tired for a couple of months following treatment.

Will I be able to have visitors?

Yes, but not pregnant women or children under the age of sixteen. This is because unborn babies and young children are particularly vulnerable to the effects of radiation. Other visitors will be allowed to stay for a maximum of 2 hours a day. Visitors are asked to sit several feet away from you during their visit.

Can I leave the room?

Whilst the plaque is on your eye you must not leave the suite unless accompanied by a nurse.

Will I be able to have a shower and wash my hair?

You will be able to have a shower but not wet your face or wash your hair.

When will I be able to go home?

You will be discharged home the day after you have had the plaque removed.

What happens when I leave hospital?

When you are ready to go home, you will have:

- An appointment to be seen at the Royal Hallamshire Hospital approximately 2-3 weeks after discharge.

You will be given:

- Betnesol eye drops, which you will need to use 4 times a day. The drops will help with any inflammation in your eye.
- Chloramphenicol antibiotic eye ointment, which you will need to use 4 times a day.

You must continue to use both the drops and ointment until you come for your next clinic appointment

Is there anything I should look out for when I go home?

When you go home and whilst the eye is recovering following surgery you should:

- Avoid strenuous exercise
- Avoid dirty environments

You should particularly look out for:

- Your eye becoming painful, red or sore
- Experience some loss of vision

Please contact your support sister if you are worried.

Who should I contact if I have any concerns?

If you would like some more information, have any concerns about your treatment or are worried about your eye once you get home then please do not hesitate to call us on:

Support Sister (Key Worker) Rhona Jacques

- **0114 271 2029**
- **0114 271 1900** (and ask for **bleep 2026**)

Support Sister (Key Worker) Lesley Hinchliffe

- **0114 226 1341**
- **0114 271 1900** (ask for **bleep 2853**)

Appointments

- **0114 271 2978**

Ophthalmologist on Call (weekends)

- **0114 271 1900** (ask for the Ophthalmologist on Call)
- **0114 271 2504** (Ward I1)

What support is available after my treatment?

You may feel quite tired for a couple of months following treatment this is perfectly normal. However if you find you continue to struggle to return to your normal activities due to the impact of your treatment additional support may be helpful.

Please contact your Support Sister (Key Worker) if you require any information on support services and or complementary therapy services in your area.

UK support groups

You can obtain further information on the Ocular Oncology Service provided here in Sheffield via our website:

- www.sheffieldocularoncology.org.uk

An American website/chat line is also available for people who have lost an eye or have lost vision in one eye. You can visit this on:

- www.LostEye.com

Where can I get any financial advice?

If you are experiencing financial problems and not sure what benefits you are entitled to, or need help with travelling expenses you can get advice from:

Macmillan Cancer Support

- 0808 808 0000

Your local Social Security Office

- www.gov.uk/benefits-adviser

Your local Citizens Advice Bureau

- www.citizensadvice.org.uk



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