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CAPE TOWN
OCULAR
ONCOLOGY
SERVICE

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Treatment with a radioactive plaque

What is plaque brachytherapy?

Radiotherapy is one of the ways to stop a tumour from growing. It can either be given at a distance, from equipment very much like X-ray machines, or by applying the radio-active substance very close to the tumour. In the case of a tumour in the eye, this is called plaque brachytherapy. It consists of a custom-made mould that is fitted over the eye and corresponds to the size of the tumour. A radio active substance is applied to the inner surface of the mould. The mould is attached to the globe, and remains there for 5 days while the tumour is irradiated. Most of the energy is directed inwards towards the tumour and does not penetrate more than a centimeter. This means there is no risk of radiation contaminating other parts of your body.

The finer details of the treatment will be discussed with you during your consultation.

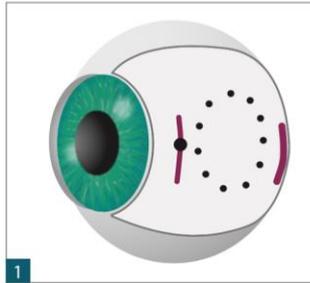
What does the treatment involve?

The Application of the plaque

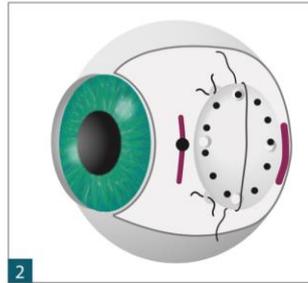
The operation will involve the attachment of the plaque under general anaesthetic. This operation is performed at UCT Private Academic Hospital and typically lasts 1.5 hours. A patch and lead shield are placed over your eye at the end of the procedure.

Radiation:

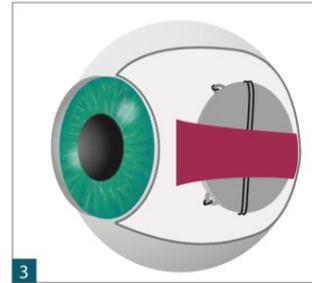
The plaque stays attached to your eye for 5 days (see below). During this time you will remain in the hospital in a single ward, in a form of isolation. You may feel a bit bored, as you will not be ill at all, and you are welcome to bring a radio, iPad and some books to pass the time. You may receive visitors. A physicist will monitor the amount of radiation emitted in your room and advise on the recommended visiting times – this approximately 20-30 minutes per day. Children and pregnant women should not have contact with you for these 5 days. Your eye may feel gritty (like there is sand in it) and you will be given regular pain medication to keep you comfortable.



1
The conjunctiva is opened and the tumor is located by transillumination. The tumor margins and the intended location of the anterior plaque edge are marked on the sclera. If necessary, any overlying extraocular muscles (red) are disinserted.



2
The dummy plaque (template) is positioned according to the scleral ink-marks and sutured to the sclera by releasable sutures placed through the eyelets of the dummy. The position of the dummy in relation to the tumor is assessed by using a right-angled transilluminator while performing binocular indirect ophthalmoscopy. Once the dummy is well positioned, a mattress suture is inserted but left loose.



3
The sutures are untied but left in place. The dummy is removed and replaced by the radioactive plaque, which is secured using the same sutures as the template. All sutures are fastened. Any dis-inserted rectus muscles are re-positioned and the conjunctiva is closed.

Removal of the plaque

1. The exact duration of the radiation is different for each patient and is calculated by the physicist, but is approximately 5 days (120 hours).
2. The plaque is removed under general anaesthetic. You should not book your flight home the same day, as you will need to recover from the general anaesthetic. It is suitable to return home the next day.
3. After the plaque is removed from your eye there will be no radiation in your body and it is completely safe for you to be around others.

Going home

1. You will be given an eye pad to wear after the operation. This can be removed the next day.
2. Sometimes your eye can become sore a few days after you have returned home from hospital. This is normal and the drops will help. Your eye may look red for several weeks after the operation but this is also quite usual, as the radiation treatment makes the wound healing a little slower.
3. If you have a lot of pain (you should not need any painkillers after 2 or 3 days), or if the vision gets worse, please contact us.
4. You will be given a follow-up appointment approximately one month after the plaque removal. If you are from another city, you can see your local ophthalmologist for this checkup.

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