

# Retinal Photodynamic Therapy (PDT)

Ophthalmology

This leaflet is for the patients considering Retinal Photodynamic Therapy. It outlines what the indications for the treatment are, what the procedure involves, its benefits, risks and side effects.

## What is Photodynamic Therapy (PDT)?

Photodynamic Therapy is a two-step technique that is performed as an outpatient procedure. The first step of the process involves an intravenous infusion of a light activated drug called Verteporfin (Visudyne); the second step is activation of the drug by a non-thermal laser.

The drug is injected into a vein in your arm. It then circulates in the blood stream and is absorbed by the abnormal leaking blood vessels in the retina (nerve tissue lining at the back of the eye which detects light and allows us to see) or the layer below the retina (choroid). A low energy laser is then directed at these vessels to activate the drug. Activated Verteporfin slows down the blood flow and allows the fluid leakage to settle. The combination of laser light and light-sensitive drug helps to seal off the leaking area. This then reduces leakage within the retina which will either stabilise your vision (stop it getting worse) or it may even improve your vision.

## Why do I need PDT?

PDT is used in the treatment of certain retinal and choroidal diseases which occur at the back of the eyes such as Central Serous Retinopathy (CSR), Polypoidal Choroidal Vasculopathy (PCV) and certain vascular conditions such as Retinal Haemangioma and Choroidal Haemangioma. PDT was used for wet macular degeneration in the past but is rarely used nowadays.

## What are the benefits?

A beneficial aspect of PDT is the fact that it can destroy the abnormal blood vessels without causing heat damage to the overlying retina.

## What are the risks and side effects?

PDT with Verteporfin Therapy is not suitable for everyone. If you have a very rare condition called Porphyria or severe liver problems or if you are allergic to any of the ingredients of Verteporfin you should not receive it. Please check with your Ophthalmologist (eye Doctor) or other healthcare professional if you think any of these apply to you.

Some patients experience adverse reactions to Visudyne Therapy. These include:

Injection site reactions such as pain swelling and inflammation (13.4%).

**The prevention of infection is a major priority in all healthcare and everyone has a part to play.**

- Please decontaminate your hands frequently for 20 seconds using soap and water or alcohol gel if available
- If you have symptoms of diarrhoea and/or vomiting, cough or other respiratory symptoms, a temperature or any loss of taste or smell please do not visit the hospital or any other care facility and seek advice from 111
- Keep the environment clean and tidy
- Let's work together to keep infections out of our hospitals and care homes.

Photosensitivity reactions, generally transient mild to moderate sunburns due to direct sunlight exposure shortly after drug administration, usually within 24 hours of administration (3%).

Transient visual disturbance includes reports of abnormal vision, decreased vision, and visual field defects. (18%).

**If you experience substantial vision loss, you should contact your Ophthalmologist or retinal specialist immediately (contact details are at the end of this leaflet).**

Approximately 2% of patients experience backache during the injection. This goes off very quickly after the injection has finished.

You may be allergic to the dye. This is very rare and you may need immediate additional treatment to deal with an allergic reaction.

As the treatment starts to have an effect you may notice that your vision fluctuates over the next few weeks.

Patients with CSR undergoing PDT treatment have a much better safety profile as half the dose of Verteporfin dye is injected, this regime has now emerged as the standard treatment for patients with CSR. Such patients do not appear to suffer any significant reduction in vision due to the treatment.

Some patients may need more than one treatment to stabilize their disease.

## What are the alternatives?

Alternatives depend on the underlying disease and may include other forms of laser or injections in the eye, but your health care professional would have considered these options already.

## How do I prepare for Photodynamic Therapy?

Please read the information leaflet and share with family so that they can be of help and support.

The Verteporfin dye makes your skin very sensitive to day light for 48 hours after the treatment. Sunscreen creams do NOT offer any protection during this period. You need to wear clothes with long sleeves, trousers/ leg and foot coverings, wear a hat, gloves and dark glasses when going outside during daylight hours for this period of time to prevent burns to your skin. Also avoid halogen lights and sunbeds.

On the day of treatment you need to bring with you dark glasses, gloves, and a hat with a brim or coat with a hood to wear when you go home.

Please do not drive to the Eye Clinic for your treatment as you will be having dilating drops which will blur your vision for up to 6 hours after the treatment and you will not be safe to drive home.

## What should I expect on the day of treatment?

Please expect to be here for 2-3 hours. It is advisable to bring someone with you.

A Nurse will check your vision and then put dilating drops in your eye/s to enlarge the pupil. These take about 15-20 minutes to work and will blur your vision for up to 6 hours.

The Nurse will weigh you and measure your height to calculate the correct dose of the Verteporfin dye.

The Doctor will explain the procedure and once you are happy to go ahead you will be asked to sign the consent form. Please ask any questions if you are unsure about anything.

A cannula (tube introduced into the vein in your arm with a needle) will be inserted and you will receive the Verteporfin dye through a cannula over a period of ten minutes.

You will then sit at a special machine with a chin rest attached to the laser machine.

Your eye will be numbed with some local anaesthetic drops.

The Doctor will wait a specific period of 3-5 minutes depending on the treatment and then will put a special contact lens on your eye to focus the laser beam. The contact lens will help to keep the eye still and the eyelids out of the way, and will allow the doctor to see the area to be treated.

You will be asked to keep your eye very still during the treatment to ensure the laser beam focuses on the leaking spot at the back of the eye. The treatment takes up to 83 seconds to complete (depending on the type of treatment). During the treatment, the laser machine makes a long beeping noise, however, please be assured that this is normal.

You may see a faint red light during the laser treatment; however, the treatment is not painful.

## What should I expect after treatment?

When the treatment is finished, the nurse will remove the cannula from your arm and you will be able to go home.

You should not drive until the dilating drops have worn off (this can last up to 6 hours).

The Verteporfin dye makes your skin very sensitive to day light for 48 hours. Avoid exposure to direct sunlight for this period. This does not mean you need to stay completely in the dark. Exposure to normal indoor lighting will help your body to eliminate Verteporfin more quickly.

Watching television and standard domestic lighting pose no risk. Halogen type bulbs (used in some high powered reading lights, etc.) can cause burns to the skin if used within 48 hours of PDT treatment, so please avoid using this type of light.

If the sun is streaming through a particular window, we advise you close the curtains or blinds in that particular room whilst you are in there to avoid burns to the skin.

You should also avoid attending the dentist or having surgical procedures done within 48 hours after PDT treatment as the very bright operating lights used in these situations could cause burns to the skin.

After 48 hours, you may resume normal outdoor activities without any special precautions.

A follow-up appointment will be arranged in a few weeks to assess response to treatment.

## Contact the Eye department if you experience:

Sudden loss or severe reduction in vision or continued misty vision.

Severe pain or redness of the eye.

## Where can I get more information?

We are here to help, please do not hesitate to contact us if you need any further information or advice. If you have any personal access needs or require wheelchair access and wish to talk to a member of staff, please get in touch using our contact details.

**Eye Referral Unit:** 01902 695805

Monday - Sunday 08:00 - 17:00

**Minor Procedures dept:** 01902 695813/695831

Monday - Friday 08:30 - 17:00

Outside of these hours, please attend the main Emergency department or contact NHS Direct on telephone number 111.

## References:

1. Photodynamic Therapy with Verteporfin (Visudyne): Impact on Ophthalmology and Visual Sciences Neil M. Bressler and Susan B. Bressler: Investigative Ophthalmology & Visual Science, March 2000, Vol. 41, No. 3 (page 627).
2. Treatment of Age-Related Macular Degeneration with Photodynamic Therapy (TAP) Study Group. Verteporfin (Visudyne) therapy of subfoveal choroidal neovascularization in age-related macular degeneration: one year results of two randomized clinical trials—TAP Report #1. Arch Ophthalmol. 1999; 117: 1329–1345.

## English

If you need information in another way like easy read or a different language please let us know.

If you need an interpreter or assistance please let us know.

## Lithuanian

Jeigu norėtumėte, kad informacija jums būtų pateikta kitu būdu, pavyzdžiui, supaprastinta forma ar kita kalba, prašome mums apie tai pranešti.

Jeigu jums reikia vertėjo ar kitos pagalbos, prašome mums apie tai pranešti.

## Polish

Jeżeli chcieliby Państwo otrzymać te informacje w innej postaci, na przykład w wersji łatwej do czytania lub w innym języku, prosimy powiedzieć nam o tym.

Prosimy poinformować nas również, jeżeli potrzebowaliby Państwo usługi tłumaczenia ustnego lub innej pomocy.

## Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਰੂਪ ਵਿਚ, ਜਿਵੇਂ ਪੜ੍ਹਨ ਵਿਚ ਆਸਾਨ ਰੂਪ ਜਾਂ ਕਿਸੇ ਦੂਜੀ ਭਾਸ਼ਾ ਵਿਚ, ਚਾਹੀਦੀ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

ਜੇ ਤੁਹਾਨੂੰ ਦੁਭਾਸ਼ੀਏ ਦੀ ਜਾਂ ਸਹਾਇਤਾ ਦੀ ਲੋੜ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

## Romanian

Dacă aveți nevoie de informații în alt format, ca de exemplu caractere ușor de citit sau altă limbă, vă rugăm să ne informați.

Dacă aveți nevoie de un interpret sau de asistență, vă rugăm să ne informați.

## Traditional Chinese

如果您需要以其他方式了解信息，如易读或其他语种，请告诉我们。

如果您需要口译人员或帮助，请告诉我们。