

## PATIENT INFORMATION

# Photodynamic Therapy (PDT)

## Dermatology Day Treatment Unit

Dermatology Unit Contact Number: 01803 654754

### **How does Photodynamic Therapy Work?**

Photodynamic Therapy (PDT) is a treatment for treating some skin cancers and sun-damaged skin, which might one day turn cancerous (pre-cancers). It uses a light-sensitive cream and a light source to destroy abnormal cells. It is very important that you tell the nurse if you have any allergies (especially to peanuts, arachis or soya).

There are 2 types of Photodynamic Therapy: Conventional PDT and Daylight PDT.

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### **What is Conventional Photodynamic Therapy (PDT)?**

Conventional Photodynamic Therapy involves the use of a light-sensitive chemical cream (called a photosensitiser). This photosensitiser is, by itself, harmless. When the light of a certain wavelength (a red light) is shone onto the skin to which the photosensitiser has been applied, the photosensitiser is activated. This causes changes in the oxygen molecules within the damaged skin cells. These "excited" oxygen molecules kill the abnormal cells. Only the area of skin exposed to the light source will be affected and inflamed. After the inflammation subsides the lesion should have cleared.

### **What skin conditions can be treated with Conventional Photodynamic Therapy?**

PDT can be used to treat various skin conditions including:

- Superficial Basal cell carcinomas
- Bowen's disease
- Actinic Keratosis

### **What does Conventional Photodynamic Therapy for skin lesions involve?**

PDT is an outpatient procedure and is administered by a Dermatology Specialist Nurse. Five days before your first appointment (but not on the day) please apply a greasy ointment (e.g. Vaseline) to the affected area if it is crusty or scaly.

Preparation of the skin will allow better absorption of the cream. The treatment takes 3-4 hours to complete.

On the day of the procedure, the first step is to apply a cream containing the photosensitiser to the area that needs to be treated. If necessary, any loose scale or crusts will be removed first. A dressing will then be applied over the cream to keep it in place, and you will be asked to return in 3 hours. This wait is to allow the photosensitiser to be absorbed and to be converted into the active chemical by the skin. The cream is then wiped off and the area cleaned. A light source using a red light is then shone onto the treatment area for approximately 7 minutes. You will be asked to wear special glasses during this time. After the treatment has been completed, a dressing will be applied for a minimum of 2 days, to prevent any further exposure to light.

### **What are the possible short-term side effects of Photodynamic Therapy?**

- **Pain** - when the red light is shone onto the skin, the treated area may hurt and you may feel a burning sensation. If it is uncomfortable, the nurse will spray the area with cold water and/or suggest pausing the treatment for a while, or a local anaesthetic injection may be recommended. After completion of the treatment, discomfort and itching may last a few days, and may require pain-killers
- **Inflammation** - the treated area may initially become pink and puffy, and may ooze a little: this is a normal reaction. It settles within a few days
- **A localised reaction** - redness, swelling, crusting, scabbing, skin exfoliation. The treated area may occasionally blister or ulcerate
- **Headaches**
- **The cream used in PDT may cause sensitisation by skin contact** resulting in application site eczema or allergic contact dermatitis
- **Infection** - if the treated area becomes red, swollen and painful, an infection may have developed, and you should contact your doctor
- **Any UV Therapy** should be stopped 24 hours before treatment
- **Sun exposure** of the treated lesion sites and surrounding skin should be avoided for 2 days following treatment

### **Potential long-term side effects of Photodynamic Therapy include**

- **Scarring** - there may be some scarring after PDT
- **Colour change** - the skin may be left darker or paler after PDT
- **Recurrence of lesion** - the treatment may have not been effective, or the condition may come back again. If this happens, you may be offered further PDT, or an alternative type of treatment may be recommended

### **Patients having 2nd Treatment**

This normally takes place a week after the first treatment. The process will be exactly the same as the first treatment. If the lesion is crusty/scaly, please remember to apply a greasy ointment (Vaseline) to the area prior to the 2nd treatment (but not on the day). A follow-up appointment will be made to see the dermatologist in 3 months.

### **General Advice**

You may wish to bring a relative/friend with you as there is a considerable time gap between application of the cream and treatment with the red light. You may also wish to bring some reading material and your own refreshments as we have no facilities available on site.

## **Follow-up**

Usually, you will be offered a follow up appointment with your dermatologist at 3 months for review.

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## **What is Natural Daylight Photodynamic Therapy (PDT)?**

Natural Daylight Photodynamic Therapy (PDT) is a simple non-invasive technique for treating mild Actinic Keratosis (sun-damaged skin). In Daylight PDT, a light-sensitive cream is applied to the affected area of skin and then Natural Daylight is used to activate the cream which destroys the abnormal cells but does not affect healthy tissue.

## **Is Daylight Photodynamic Therapy suitable for me?**

Daylight PDT is a standardised and recognised procedure for the treatment of actinic keratosis (AK) to the face and head, requiring only one treatment to each area. It has the advantage over Conventional Photodynamic Therapy which uses a red light source and is much more painful. **It is very important that you tell the nurse if you have any allergies (especially to peanuts, arachis or soya)**

## **Preparing for your Daylight PDT treatment**

Five days before your appointment (but not on the day) please apply a greasy ointment (e.g Vaseline) to the affected area if it is scaly. Preparation of the skin will allow better absorption of the cream. On the day of your treatment, please do not apply any sunscreen, moisturiser or other skin products, including make-up, as these may affect the treatment.

## **What does Natural Daylight Photodynamic Therapy involve?**

PDT is an outpatient procedure and is administered by a Dermatology Specialist Nurse. You will be asked to sign a consent form to confirm that you are happy to receive the treatment. The nurse will then apply a sunscreen with SPF 30 or higher to the treatment area. The hospital will provide this sunscreen. This will protect your skin from the ultraviolet light rays but will not block the daylight. After a few minutes when this has dried, the nurse will then prepare the lesion(s) by gently removing any overlying crusting skin. A thin layer of a light-sensitive cream will then be applied to the treatment area and left uncovered.

Sun exposure needs to take place within 30 minutes of application of the cream and you need to be able to sit comfortably for two hours in total in daylight. If it is very hot, you can sit in the shade.

After two hours of sun exposure, the cream needs to be washed off and the area needs to be covered with a hat, dressing or sunscreen reapplied for the rest of the day. You can do this by yourself at home.

Sun exposure of the treated lesion sites and surrounding skin should be avoided for 48 hours following treatment.

If it is raining on the day, the treatment will need to be re-booked.

### **What are the possible short-term side effects of Photodynamic Therapy?**

- **Mild discomfort, tingling or pain** - which can last a few days, and may require pain-killers
- **Inflammation** - the treated area may initially become pink and puffy, and may ooze a little: this is a normal reaction. It settles within a few days
- **A localised reaction** - redness, swelling, crusting, scabbing, skin exfoliation. The treated area may occasionally blister or ulcerate
- **If the area treated is in the 'T' zone** (forehead, nose or chin) you may experience some swelling in the surrounding area or of the eyelids on the treated side. This is not very common but can occur. This is caused by a normal soft tissue response to the chemical reaction that has taken place during treatment. Sleeping propped up with extra pillows can help reduce this
- **The cream used in PDT may cause sensitisation by skin contact** resulting in application site eczema or allergic contact dermatitis
- **Infection** - if the treated area becomes red, swollen and painful, an infection may have developed, and you should contact your doctor
- **Any UV Therapy** should be stopped 24 hours before treatment
- **Sun exposure** of the treated lesion sites and surrounding skin should be avoided for 48 hours following treatment

### **Potential long-term side effects of Photodynamic Therapy include**

- **Scarring** - there may be some scarring after PDT
- **Colour change** - the skin may be left darker or paler after PDT
- **Recurrence of lesion** - the treatment may have not been effective, or the condition may come back again. If this happens, you may be offered further PDT, or an alternative type of treatment may be recommended

### **Follow-up**

Usually, you will be offered a follow up appointment with your dermatologist at 3 months for review.

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For further assistance or to receive this information in a different format, please contact the department which created this leaflet.