

**Patient
Information**

Diphencyprone (DCP) treatment

Introduction

This leaflet gives you information about Diphencyprone (DCP) treatment for alopecia areata and answers some of the commonly asked questions.

What is Diphencyprone (DCP)?

Diphencyprone (DCP), also known as Diphenylcyclopropenone (DPCP), is a powdery crystal, made into a solution with acetone. It is most often used in the treatment of alopecia areata. DCP is currently unlicensed in the UK.

What is alopecia areata?

Alopecia areata is a chronic autoimmune disorder leading to hair loss. Hair follicles normally produce hair. However, in alopecia areata white blood cells around the hair follicles release chemical messengers which cause the hair follicle to reject the hair. We don't know why this happens.

Patients often complain of round bald patches appearing and these often affect the scalp, although eyebrows, eyelashes, the beard and other areas with hair can be affected.

When might DCP be prescribed?

Before DCP treatment you may have been prescribed steroids in a cream, called topical steroids. You may also have had steroid injections into the areas of hair loss.

If these have been unsuccessful or if your hair loss is becoming more widespread, the option of DCP treatment may be offered.

When should you not have DCP treatment?

DCP treatment is not recommended during pregnancy or when breastfeeding. Adequate contraception is recommended during treatment and for 6 months after.

Reference No.

GHPI1415_05_21

Department

Dermatology

Review due

May 2024

**Patient
Information**

How does DCP work?

DCP works by causing contact dermatitis.

This is where the skin becomes pink or reddened and itchy where the DCP has been applied. Your body's immune system is then stimulated, causing inflammation on the surface of the skin and diversion of white blood cells away from the hair follicle. By doing this, it allows your hair to regrow.

What is the success rate of DCP?

DCP is not effective for everyone but reports suggest the overall rate of any hair regrowth was 74.6% in patchy alopecia and 54.5% in alopecia totalis (all or nearly all scalp hair loss) and alopecia universalis (all or nearly all hair on the entire body lost).

Complete regrowth rate was 42.6% in patchy alopecia and 25.9% in alopecia totalis and alopecia universalis.

It is usually recommended that your treatment is continued for 6 months. You will be carefully assessed by a member of the nursing staff prior to each treatment in order to monitor your response to DCP.

Recent onset alopecia areata is more likely to have a positive response to treatment. Recurrence of alopecia areata may occur after the treatment has been stopped.

What preparation is required before treatment?

We will ask for your consent before your DCP treatment can start. Your consent will also be needed to allow the medical photographer to take pre-treatment photographs.

**Patient
Information****The first stage of treatment (sensitisation)**

In order for the treatment to have the opportunity to work, sensitisation of your skin to DCP is required. A small area (the size of a 10p coin) of your bald skin is painted with DCP, at a concentration of 2%, using a cotton bud. Where the application was made is recorded and you are asked to monitor the area for itching and pink or redness of the patch and to note how long this lasts. A blister may occur and the reaction may take 3 to 5 days to develop. Taking a photograph with a mobile phone camera can be a good method of monitoring your reaction to the DCP. The photographs can be shown to the nurse at your next appointment.

Should you have any concerns about your response you can ring the Dermatology nurses for advice (the number is at the end of this leaflet).

In some cases there is no response and the process of 2% DCP application is repeated a week later. If you do not respond to the second application then DCP treatment may not be appropriate for you.

You are advised to keep the area covered for 48 hours, for example by using a scarf, hat, wig or your existing hair. This is so that the DCP is not exposed to light as this destroys the DCP. After 48 hours, you should wipe off the DCP with a wet tissue before showering. You should repeat this care after each application of DCP.

The second stage of treatment (titration)

After sensitisation the lowest DCP strength (0.001%) is applied to areas of alopecia on your scalp (maximum of 50% of the scalp).

This process may be repeated weekly with increasing strength of DCP (this is called titration) until a desired response is achieved (this is a 36 to 48 hour response of itchy, slightly pink skin).

Patient Information

The third stage of treatment (therapy/treatment)

You are now ready to have all areas of alopecia treated with DCP at the right strength for you. The extent of DCP application will be decided on an individual basis depending on the amount of hair loss you have and the response you had to the titrating doses.

Normally, areas of alopecia are treated on a weekly basis. However treatments may need to be adjusted depending on the severity of the response.

Possible side effects

You may experience one or more possible side effects to the DCP treatment. These are listed below together with how we will manage them if they occur:

- **Intense itching** and/or redness of the treated areas. These areas may need a daily application of a topical steroid cream which will be prescribed. This can be applied with your fingers once the DCP has been washed off.
- **Dry scaly skin** on treated areas. You will be given a cream, also known as an emollient, to apply at least twice a day to the dry patches.
- **Eczema** or deterioration of existing eczema. A prescription for a topical steroid cream or oral steroids and an emollient will be provided. Your consultant will discuss your treatment with you and it may be decided that DCP is unsuitable.
- **Swelling/tenderness of lymph glands** in the neck or base of your skull. If this continues, the DCP concentration may be reduced or used less often.
- **Vitiligo** - loss of the dark colour of the skin called pigmentation, to treated areas. This is more common in people with dark skin. It is important that you are aware of this risk before starting the DCP treatment and that vitiligo may be permanent. If at any point during the treatment this becomes a problem the DCP can be stopped.
- **Hyperpigmentation** - darkening of the skin in treated areas. If this happens you will be informed and you will have the option to stop the treatment.

Patient Information

- **Fever or flu like symptoms** - these usually resolve in 24 to 48 hours but you should drink plenty of fluids and take pain relief such as paracetamol (follow the instructions in the packet). Please discuss your symptoms with the nurse or consultant at your next appointment.
- **Urticaria** - this is itchy swellings or nettle rash in the treated area which comes and goes. An antihistamine may be required and your consultant will discuss the suitability of further DCP treatment with you.
- **Oedema of the scalp** and sometimes of the face (puffy swelling), this should be treated as with urticaria above.
- **Widespread autoeczematisation** – this is very rare and may involve a severe reaction at the site of the DCP application and at other sites away from the treated area. This will require urgent medical attention.

Contact information

Dermatology nurses

Tel: 0300 422 8193 or

Tel: 0300 422 8454

Monday to Friday, 8:30am to 4:30pm

Reference

Solan Lee et al. Hair growth outcomes of Contact immunotherapy for patients with alopecia areata: A systematic review and meta-analysis. JAMA Dermatol 2018 October 1; 154 (10); 1145–1151.

Content reviewed: May 2021