

The National Eczema Society receives no Government or Health Service funding.

The Society relies entirely on voluntary income.

ALL our information is clinically evidence based and written by or verified by dermatology experts.

Eczema affects 5 million children and adults in the UK every year.

The National Eczema Society is the only organisation in the UK devoted to improving the quality of life for people with eczema and their carers.

The Society provides practical support and information on the day-to-day management and treatment of eczema including:

Confidential telephone and e-mail Helplines

Factsheets and information booklets

Members' information pack and quarterly magazine.

Ciclosporin

Introduction

Ciclosporin is a potent immunosuppressant drug, which can be an effective treatment for severe eczema. It was originally used to prevent organ rejection in transplant patients. It was discovered in the 1970s and, rather like penicillin, is derived from a fungus. The first, and most important, use of this drug was the suppression of the body's rejection of kidneys, hearts, bone marrow and other organs following transplantation.

It was first used in dermatology in the early 1980s in the treatment of psoriasis, but it is also used in the treatment of atopic eczema. However, it is not a cure and unfortunately, because of its side effects, it may not be suitable for everyone. It is available in the UK as capsules containing 10 mg, 25 mg, 50 mg and 100 mg of ciclosporin (one formulation is called Neoral®). A liquid preparation is also available.

How does ciclosporin work?

Although the cause of atopic eczema is not fully understood, it is clear that immunological reactions are occurring in the skin and these are controlled by white blood cells (lymphocytes) that enter the skin from the blood. Ciclosporin has many actions on the immune system and tends to dampen down strong allergic and immune reactions.

Ciclosporin works in atopic eczema by decreasing the production of inflammatory cytokines (chemical messengers that 'switch on' other lymphocytes and regulate immune responses). It is a strong immunosuppressant and starts to work rapidly (within 1-2 weeks). Further improvements can occur up to 12-16 weeks after the start of treatment. For many people it is very effective, and most will notice a marked improvement in the itching and appearance of the skin. As the eczema improves, often so does self-confidence and quality of life.

When is ciclosporin used?

Ciclosporin is generally used for cases of severe persistent atopic eczema unresponsive to topical treatment, or requiring frequent courses of oral steroids. As with all treatments there are occasional patients who do not benefit.

It is currently licensed for short-term treatment (8 weeks) of patients with severe atopic eczema in whom conventional therapy is ineffective or inappropriate. In patients over 18 years, it is often used for longer maintenance therapy, although this has to be on the direction of a dermatologist. Ciclosporin can be used as a short-term treatment for children aged 1 month to 18 years, under the supervision of a consultant dermatologist. The dose of ciclosporin is usually calculated on body weight and is given in two divided doses. The usual dose recommended is 2.5 to 5 mg/kg daily. Your dermatologist may recommend that you divide your ciclosporin into a morning and evening dose. The dose is usually calculated in proportion to weight, and most dermatologists rarely use a dose higher than 5 mg for each kilogram of body weight each day. The amount of improvement depends on the dose - the higher the dose, the more the benefit - but this has to be balanced against the side effects discussed below.

Atopic eczema can flare quickly on withdrawal of ciclosporin and for this reason it is best to reduce the dose slowly. Doctors will often recommend switching to alternate-day treatment, then every third day. More potent topical treatments may be introduced as the dose is reduced.

Ciclosporin is not a cure for eczema. Unfortunately, in most cases the eczema comes back again when the treatment is stopped. However, in some cases it remains relatively mild for several months without further treatment. An added advantage of

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ciclosporin is a reduction in the need for other treatments such as topical steroids or oral steroids. This reduces the side effects from these other treatments.

What are the side effects?

Ciclosporin does have side effects, which means that it cannot be used for everyone. The side effects of ciclosporin are almost all 'dose-related'. This means that the higher the dose you take, the more likely you are to develop side effects. People will also vary in their susceptibility, so that some develop severe side effects quickly, and others can take ciclosporin for many years without the development of side effects. Most side effects settle when you stop taking the drug, but the longer you take ciclosporin the more severe the side effects will become.

The main side effects of ciclosporin are hypertension (high blood pressure) and reduced efficiency of the kidneys (renal toxicity). Blood pressure and kidney function need to be checked before treatment and monitored closely throughout treatment. So if you are taking ciclosporin, you will need regular monitoring, which is explained below.

There is a possible increase in developing certain types of cancer with long-term treatment because of the effect of ciclosporin on the immune system. Female patients are advised to keep their smear tests up to date if they are taking ciclosporin. Ciclosporin can also suppress the immune system. This means that the risk of bacterial, fungal and viral infection is greater when you are on this medication.

Other less serious but troublesome side effects include increased hair growth. This is a relatively common side effect and can be distressing, particularly for women. You may experience swelling and enlargement of the gums, which is usually a problem with higher doses. Nausea, tremor (shaky hands), altered sensation (pins and needles) and headaches can also be a problem.

Despite these side effects, many people find that the resulting benefits from the treatment produce significant relief.

What monitoring is needed?

As possible side effects of ciclosporin include high blood pressure and reduced kidney function, if you are prescribed ciclosporin, your blood pressure and kidney function will need to be checked before treatment and monitored closely throughout treatment.

Kidney function is usually checked using blood and urine tests to measure a substance called creatinine that is removed by the kidneys. Blood and urine tests will usually be

taken every 3 months, more frequently at the start of treatment. If there are signs that your blood pressure or kidneys are being affected, the dose of ciclosporin will normally be reduced, or discontinued, and in most cases things will return to normal.

Can ciclosporin be used in combination with other drugs?

A number of different drugs may influence the level of ciclosporin in the blood. A particularly important example is the antibiotic erythromycin, since this is often prescribed to patients with eczema.

If you are started on any new tablets you should let the doctor know you are taking ciclosporin, as it is important to check that there are no specific drug interactions. If you are taking ciclosporin and a doctor prescribes any additional drugs, always ask whether it is safe to take these treatments together with ciclosporin.

Over-the-counter painkillers such as ibuprofen should be avoided as these may increase the risk of kidney damage. Grapefruit juice reduces the absorption of ciclosporin from the gut and should be avoided, as the dose achieved may be too low for effective treatment.

Can anyone use it?

Ciclosporin is licensed for young people 16 years and over and adults with severe eczema. Ciclosporin may also be prescribed and supervised by a dermatologist for the treatment of children with severe eczema.

Ciclosporin cannot be used for milder cases of eczema, as the side effects would be out of proportion to the benefits. Ciclosporin is reserved for people with eczema whose lives are being severely disrupted by eczema and who do not respond successfully to topical treatments (topical corticosteroids and Protopic and/or Elidel).

Ciclosporin should not be taken if you have any severe infection (for example, tuberculosis) or any serious form of cancer, or if you have previously had serious cancer.

This is because ciclosporin damps down the immune system and so might make these conditions worse or, in the case of cancer, more likely to recur.

Extra care will be required if you have had any previous kidney or liver disorder, high blood pressure, diabetes or high blood cholesterol. In these circumstances, it may not be possible to use ciclosporin. As with all other drugs, it is best avoided in patients who are pregnant.

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Summary

- Ciclosporin is a potent oral immunosuppressive agent that may be used for short-term treatment to bring eczema under control, or longer term (>12 months) for maintenance therapy.
- It has a rapid effect in improving symptoms.
- The main side effects are high blood pressure and reduced efficiency of the kidneys. Regular monitoring of blood pressure and renal function is therefore important.
- With continued long-term use, there is a possible risk of developing certain types of cancer.

The National Eczema Society is grateful to Dr Andrew Wright, Consultant Dermatologist, St Luke's Hospital, Bradford, for reviewing and updating this factsheet.

Further information

Eczema Helpline

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Email

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To join NES call 020 7281 3553 (Mon-Fri) 9am to 5.30pm, email:

membership@eczema.org

or join online at:

www.eczema.org

Disclaimer

These details are provided only as a general guide. Individual circumstances differ and the National Eczema Society does not prescribe, give medical advice or endorse products or treatments. We hope you will find the information useful, but it does not replace and should not replace the essential guidance given by your general practitioner, dermatologist and dermatology nurse.

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