Factsheet

Pompholyx eczema factsheet

Pompholyx eczema (also known as 'dyshidrotic eczema') is a type of eczema that only affects the hands and feet. It involves the development of intensely itchy, watery blisters, affecting the sides of the fingers, the palms of the hands and soles of the feet.

Some people have pompholyx eczema on their hands and/or feet with other types of eczema elsewhere on the body. This condition can occur at any age but is usually seen in adults between 20 and 40 years old and is more common in women.

What causes it?

The exact causes of pompholyx eczema are not known. It is thought that sensitivity to metal compounds (such as nickel, cobalt or chromate), heat and sweating and stress can aggravate this condition.

50% of people with pompholyx have atopic eczema as well, or a family history of atopic eczema. Pompholyx eczema can coexist with fungal infections, so assessment should include checking for the presence of any fungal infection on the hands and/or feet.

Pompholyx eczema occurs on the palms of the hands, fingers and feet. The skin in these areas is particularly prone to exposure to potential sources of irritation and aggravation. For this reason, pompholyx eczema can be debilitating and difficult to manage. It can also cause problems with employment, using hands for manual labour and keyboards.

The hands and feet are also prone to contact dermatitis. This can take one of two forms: irritant contact dermatitis or allergic contact dermatitis.

An irritant reaction could be the result of contact with potential irritants such as soap, detergents, solvents, acids/alkalis, chemicals and soil.

Or there could be an allergic reaction to a substance that is not commonly regarded as an irritant, such as rubber, nickel, or dyes in leather shoes and gloves. It is possible to have been in contact with a substance for years without any problems and then suddenly develop a sensitivity to it. If you identify a pattern, tell your GP, as patch testing may be appropriate. Patch testing is carried out in suspected cases of allergic contact dermatitis, not irritant contact dermatitis.

Pompholyx can occur as a single episode, but for most people, it is a chronic type of eczema that will come and go with a flare lasting for a few weeks.

What does pompholyx look like?

The skin is initially very itchy with a burning or prickling sensation. Then comes a sudden crop of small blisters (vesicles), which turn into bigger, weepy blisters, which can become infected. When the skin is infected, there is inflammation, irritation/pain, swelling and pustules.

There is often subsequent peeling as the skin dries out, and people of any skin colour can experience skin that is red or darker than the surrounding skin, and dry, with painful cracks (skin fissures). Pompholyx eczema generally affects the palms, soles and sides of fingers and toes. It can also affect the nails and nail folds causing swelling (paronychia).

Treatment

Any obvious trigger for the pompholyx flare should be avoided as much as possible, especially in the case of a contact allergy.

Emollients (medical moisturisers) are first line treatments and should be used several times a day for washing and moisturising.

Use an emollient that suits you, carry around a small pot to use for hand washing and reapplication – and avoid soap and handwashes. You may need a cosmetically acceptable cream or gel in the day, and an ointment at night (under cotton gloves). Emollients are on-going treatments and can prevent flares of pompholyx. Please see Eczema UK's factsheet on Emollients for more information.

If your skin is weeping, oozing or crusting, a potassium permanganate soak may be advised.

Potassium permanganate is a chemical that can be obtained as a 'tablet', solution or crystals. It is for external use only, which means it should never be put in the mouth or swallowed. It is usually obtained on prescription (generally as Permitabs) but can be bought over the counter from a pharmacy. We recommend speaking to a healthcare professional before using it. Potassium permanganate soaks can be used once or twice a week.

Wearing disposable protective gloves, use a clean container (such as a large saucepan, bucket or washing up bowl) lined with a clean white bin liner bag.

A white bin liner bag will allow you to see the colour of the water when potassium permanganate is diluted with it. Fill the lined container with 4 litres of warm tap water and add one tablet – allow the tablet to dissolve completely in the water. The colour of the water should be light pink, or the colour of rosé wine. Soak the hands and/or feet in this solution for 10-15 minutes. Then rinse them in water with emollient, and pat them dry with a clean towel.

Potassium permanganate will stain the skin and the container, which is why it is advisable to wear gloves when handling it, and to use a saucepan, bucket or washing-up bowl lined with a bin liner bag as the container.

It is also a good idea to apply petroleum jelly (for example, Vaseline) to the nails beforehand to prevent staining. After using the soaks, continue to moisturise your hands and/or feet with emollient.

Potassium permanganate soaks should only be used for very weepy pompholyx for no more than 3 days (to avoid skin staining) – do not use if skin is dry and has intact blisters.

A leave-on emollient or an emollient soap substitute should be used for washing, since soap de-greases the skin and can also act as an irritant.

During the Covid-19 pandemic, people with eczema were advised to wash their hands first with soap and then with an emollient, as emollients were not considered effective at removing Covid-19 particles.

Pompholyx eczema needs to be treated with topical steroids to reduce inflammation and heal cracks. Hands need stronger steroids (the skin of the palms and soles is thick), weaker steroids will not be effective.

Strong topical steroids are usually prescribed for adults (moderately potent for children). They should be used for a short treatment burst – between 2-4 weeks (palms and soles often need more prolonged treatment).

Topical steroids are used once a day, it is advised to apply at night, wait 30 minutes then put on your emollient with a pair of cotton gloves to keep treatments in place.

For more information, see Eczema UK's factsheet on Topical steroids.

Topical steroids will need to be prescribed by your GP or other healthcare professional. Topical steroids switch off the inflammatory response, but as they reduce the inflammatory process, the skin can become drier, so you will need to apply emollient frequently.

Ideally when an acute flare of pompholyx has cleared, treatment will continue with emollients alone. If your hands have not cleared or start to flare again, topical steroids can be used as maintenance therapy, using twice a week on two consecutive days for 8-12 weeks.

Topical calcineurin inhibitors, pimecrolimus (Elidel) or tacrolimus (Protopic) may also be prescribed as maintenance to be used on two divided days a week (for example Tuesday and Saturday) as longer-term ongoing maintenance.

For more information, please see Eczema UK's factsheets on Topical steroids and Topical calcineurin inhibitors.

If your hands and/or feet are sore and weepy, and yellow crusting is present, you may have a bacterial infection.

This will require a course of oral antibiotics, prescribed by a healthcare professional.

Additional treatments for severe pompholyx

For severe pompholyx eczema, a dermatology referral may be required for treatment and/or diagnosing contact allergy through patch testing.

Treatment may include a short course of an immunosuppressant drug. Alitretinoin (known as Toctino) is an oral treatment for adults with severe chronic hand eczema (including pompholyx) that has not responded to treatment with potent topical steroids.

Alitretinoin works by reducing the inflammation associated with eczema as well as damping down the response of the immune system. It is a capsule that is taken by mouth once a day with a meal for 12-24 weeks, depending on how the condition responds to the treatment.

Alitretinoin can only be prescribed by dermatologists or doctors with experience both in managing severe hand eczema and in the use of retinoids. The specialist will determine whether your hand eczema is severe by examining your hands and asking a series of questions about how the eczema affects your life. You will need to be carefully monitored.

Retinoids are likely to cause severe birth defects if taken during pregnancy. This means that anyone with childbearing potential must avoid becoming pregnant during treatment and for one month after stopping treatment – for example, by using two effective methods of contraception. The drug can only be prescribed if a pregnancy test is negative. Regular pregnancy tests will be taken during treatment.

You should not breastfeed while taking alitretinoin and for a month after completing treatment.

The most common side effects are headaches, dry lips and skin, and flushing. Other side effects include raised blood fats such as cholesterol, and decreased levels of thyroid hormone. Due to potential side effects, a lower dose will be prescribed if you are diabetic.

Phototherapy (UVB or PUVA), using either UVB or UVA rays administered by a special foot/hand light box, may be recommended if this treatment option is available locally to you.

Assessment and treatment (2-3 times a week) usually takes place in a dermatology department. In some areas of the UK, you may be loaned a light box so you can administer your treatment at home, although you will continue to be monitored by the dermatology department. Phototherapy treatment is usually carried out for 12-16 weeks.

Occasionally, for very severe outbreaks of pompholyx eczema, a short course of oral steroid tablets is prescribed.

A new topical treatment cream, called delgocinib, will be available in the NHS.

This is a cream which is a type of drug known as a Janus kinase (JAK) inhibitor. JAK-inhibitors are named after the messaging pathway that they block within cells. In eczema, there is excessive inflammation in the skin.

Delgocinib will be licensed for chronic hand eczema only, not pompholyx. However, patients with pompholyx with a diagnosis of chronic hand eczema will be eligible for this treatment.

Practical management

- Use lukewarm water for washing as very hot or cold water may irritate the skin. Remember to use an emollient as a soap substitute.

- Try to avoid direct contact with detergents and cleansing agents. Wear 100% cotton gloves under rubber or plastic gloves when carrying out household tasks. When shampooing your hair, wear cotton gloves under waterproof gloves, as above. If possible, when the pompholyx is active, ask someone else to do the shampooing for you – and the housework, too!

- If itchiness is interfering with sleep, sedating antihistamines may be helpful at night (but will cause unwelcome drowsiness if taken during the day). Remember, antihistamines in eczema aid sleep rather than actively treat itch.

- Large blisters may be gently drained by using a large sterile needle. Very gently make a small jagged tear in the blister (a pin-prick hole will not be effective as it will not release fluid and will seal up very quickly). Make sure you do not remove the 'roof' of the blister – this protective layer of skin needs to stay in place, otherwise soreness can increase, healing can be delayed and there is a risk of infection.

- Socks, tights and gloves should be made from cotton, bamboo or silk (as close to 100% of these different materials as possible), as synthetic materials such as nylon are less absorbent and do not generally allow the skin to 'breathe' in the same way.

- Bandaging or wrapping the hands and/or feet can help protect the skin. Alternatively, cotton, bamboo or silk gloves or socks can be worn. Covering the skin can bring some relief as well as ensuring that creams and ointments are given the maximum opportunity for absorption.

  If paste bandages or wet wraps are used, you should consult a healthcare professional about their suitability, how to put them on, and how to use them with creams and ointments.

  Any weeping blisters should be covered with a nonstick dressing, to prevent tearing the blister roof.

- For severe cracks, a steroid impregnated tape can be applied to protect them and speed up healing. It would need to be prescribed by a healthcare professional.

- If you have painful cracks post-blister stage, Extra Thin Duoderm is a helpful hydrocolloid dressing that you can cut to shape and put on cracks. It can be left in place undisturbed for a few days. Speak to a healthcare professional before using Duoderm on an area you are treating with topical steroids, because when you closely cover skin that is being treated by a topical steroid, this will make the topical steroid more potent.

- Footwear should be kept dry and permeable to the air. Avoid plastic or rubber shoes, or any other type of footwear likely to cause sweating. Light shoes with cotton linings are preferable to shoes with synthetic linings.

Disclaimer

Our publications contain information and general advice about eczema. They are written and reviewed by dermatology experts, with input from people with eczema.

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