Superficial fungal infections

Introduction

Fungi that can cause superficial skin infections usually live in the dead topmost layer of the skin of moist areas of the body, such as between the toes, in the groin area, and under the breasts. Obese individuals are more likely to develop superficial fungal skin infections, because they have excessive skin folds. People with diabetes also appear to be at risk.

There are many types of fungal skin infections. This article will briefly discuss three commonly occurring fungal skin infections.

Ringworm (tinea)

Despite its name, ringworm infection is not caused by worms. The name was attributed to this infection because of the ring-shaped skin patches that are often caused by the infection.

Different fungi, depending on their location on the body, cause ringworm. Symptoms vary, depending on the location on the body. Usually there is little or no inflammation, and the infected areas are mildly itchy, with a scaly, slightly raised border.

Jock itch (tinea cruris)

Jock itch is a fungal infection of the groin area, is much more common in men than in women, and usually develops during warm summer months. The infection starts in the skin folds of the genital area, and can spread to the inner thighs. Jock itch, as the name suggests, can be quite itchy, and may be painful.

Treatment usually involves application of an antifungal cream or lotion. Oral antifungal drugs, available on a doctor’s prescription, may be needed for those with widespread infections, or infections that do not heal with topical drugs.

Scalp ringworm (tinea capitis)

Scalp ringworm is very contagious, and is common in children. It can cause a pink, scaly rash that may be itchy, or it can present as a patch of hair loss without a rash. Children presenting with scalp ringworm need to be referred to the doctor as oral treatment is often necessary. An antifungal cream can be applied to the affected scalp area to limit spread, and a selenium sulphide 2.5% shampoo should also be used at least twice a week.

Body ringworm (tinea corporis)

Body ringworm can affect the face, trunk, arms or legs. The infection usually presents as round patches with scaly pink borders, and a clear area in the middle. The rash may be itchy. Body ringworm is treated with a topical antifungal cream or lotion. Treatment is usually continued for seven to 10 days after the rash has disappeared to avoid the infection recurring.

Pityriasis versicolor

Tinea versicolor (pityriasis versicolor) is a common fungal skin infection that occurs mostly in adolescence and early adulthood. The infection is characterised by patches of skin that are usually lighter in colour than the surrounding skin. The infection prevents the skin from tanning evenly, and patches are usually found on the chest or back. The skin may scale slightly, but is rarely itchy.

Topical antifungal drugs, such as ketoconazole or terbinafine, may be used to treat the infection. Selenium shampoo, applied full-strength to the affected areas at bedtime, left on overnight and washed off in the morning, is also effective. Treatment should be continued for three or four nights.

Oral antifungal drugs are sometimes needed to treat widespread or resistant infection. The skin may not regain its normal pigmentation for many months. The infection often recurs because the fungus that causes it normally lives on the skin. Sometimes doctors recommend using 2.5% selenium sulphide shampoo every month to prevent recurrence.
Candidiasis (yeast infections)

Candida yeast is a normal resident in the mouth, digestive tract and vagina.

However, in certain conditions Candida can overgrow to infect the skin:
• In hot, humid weather.
• When wearing tight synthetic underwear.
• When there is poor hygiene.
• When diabetes, or a weak immune system, exist.

Candidiasis symptoms vary depending on the location of the infection. Infections in skin folds or in the navel usually cause a bright red rash. Small pustules or pimples may appear, which may ooze white fluid. The rash may burn, and can be very itchy. Candidiasis symptoms may resemble other skin conditions, and patients should be referred to the doctor for diagnosis.

Generally, candidiasis of the skin is easily treated with a topical cream containing clotrimazole, ketoconazole, miconazole or nystatin. Keeping the skin dry helps clear up the infection, and prevents it from recurring. Using a talcum powder can help to keep the skin surface dry. Sometimes the doctor may prescribe a cortisone cream to reduce itching and pain quickly. However, cortisone creams should not be used on their own, as they can worsen the fungal infection.

General treatment of superficial fungal infections

Topical azole antifungals, e.g. clotrimazole, ketoconazole, econazole and miconazole, may be used to treat a variety of superficial fungal infections of the skin. The treatment is usually applied two to three times a day. Available formulations include creams, lotions, powders and sprays. Ketoconazole is also available as a shampoo.

Terbinafine is available as a cream, solution, spray and gel formulation. There is evidence that terbinafine is better than topical azoles in preventing recurrence. However, the products are not recommended for use in children under the age of 12 years.

Tolnaftate may be used for superficial fungal infections. It is applied twice daily for two to three weeks, but treatment should ideally be continued for up to six weeks.

Undecanoates, such as zinc undecanoate, are available as creams and powders.

Nystatin is available as a cream, but its use is limited to yeast infections of the skin.

Bibliography

4. Mims, 2011;51(5).