Today's Treatment

Diseases of the Skin

Treatment of Skin Infections and Infestations

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British Medical Journal, 1973, 4, 475-478

In recent years several discoveries have revolutionized the treatment of skin infections and infestations. There is now general agreement on the therapeutic approach to nearly all the common dermatoses.

Bacterial Infections

Boils, which are due to a staphylococcal infection within a hair follicle, are usually rapidly self-limiting. As such, they require no systemic antibiotics. When boils become recurrent, however, the following points of management should be followed:

- (1) Search for the underlying cause. It is surprising how rarely diabetes presents in this way.
- (2) Take bacteriological swabs from both the lesions and the carrier sites (nares, axillae, and perineum).
- (3) Apply the appropriate antibiotic ointment, usually neomycin or fucidin four times daily to the carrier sites, and,
- (4) At the same time give a course of an appropriate systemic antibiotic.

It is impossible to cut corners in the treatment of recurrent boils; inadequate treatment rapidly produces resistant strains and will compound your difficulties.

IMPETIGO

Impetigo is a much less leisurely disease and you cannot wait for the result of bacteriological examination of a swab before starting treatment.

- (1) Take a swab for bacteriological examination.
- (2) Look for a predisposing cause such as scabies, head lice, or otitis externa.
- (3) Ask about family contacts and institute commonsense measures to avoid cross-infection.
- (4) Ensure that no topical corticosteroids are being supplied.

At this point decisions must be made on therapy. Systemic antibiotics undoubtedly hasten resolution; however, this is not the only criterion for their administration. The only serious sequel of impetigo is acute glomerulonephritis, which occurs in a small proportion of those 15% of cases in which streptococci play a part.

(5) Hence a systemic antibiotic of the penicillin series is exclusively indicated even though many of the causative staphylococci may be resistant to ordinary penicillins.

Effective local therapy is all the more important in dealing with the infection and this is enhanced by

(6) Removal of crusts and exudate with weak 1/10,000 potassium permanganate solution, followed by

(7) Four-hourly applications of one of the following topical antibiotics: neomycin, framycetin, or fucidin.

Resolution is rapid and should be complete in less than seven days.

Fungus Infections

Common superficial cutaneous infections with fungi fall into three types. It is important to distinguish which one is responsible since the treatment is different in each. A fourth disease, erythrasma, also merits brief mention since, though it is really due to a filamentous bacterium, clinically it resembles fungus infection.

RINGWORM

Ringworm infections are caused by fungi which metabolize keratin. The sites affected are important since these dictate different regimens of treatment. The actual genus of fungus involved is of less importance. Some genera respond to simple prolonged local therapy, while others tend to resist local measures and adjuvant systemic therapy is needed. Unfortunately, it is not possible to differentiate between genera except by mycological culture; this takes three weeks and facilities are not generally available outside large hospitals. In rough clinical terms, however, the more inflamed or vesicular the fungus infection the more readily will it respond to purely local forms of therapy.

Ringworm of the Feet (Tinea pedis)

If Inflammation is Present.—It is important to be gentle, for any strong local fungicide is likely to aggravate the problem. The inflammation will be due either to an allergic reaction, to the presence of fungus, or to a combination of allergy with secondary bacterial infection.

(1) Treat with 1/7,500 potassium permanganate solution used as warm soaks or compresses for twenty minutes up to four times daily.

(2) Blisters may be pricked with a sterile needle, and,

(3) A cream or ointment containing a corticosteroid and hydroxyquinolone (hydrocortisone with vioform or Remiderm) may be applied.

(4) Once inflammation has subsided, treat with local applications of Whitfield's ointment (benzoic acid compound ointment B.P.C.).

(5) Prophylactic measures are impracticable. Tinea of the feet is spread particularly in swimming baths, saunas, and showers. There is no effective method of protection. Antiseptic and antifungal flooring is not helpful and only frequent hosing has been shown to reduce the numbers of fungus filaments on wet floors.

Within the family cross infection is a real risk and common-sense use of the bathroom, socks, and towels must be impressed on the patient.

If Inflammation is not Present.—These infections are probably due to a genus of fungus so well adapted to its human host that only systemic treatment will dislodge it. These patients should be treated with,

(1) Local applications of Whitfield's ointment.

(2) Griseofulvin tablets in a total dosage of 500 mg per day. A once-daily dose is usually effective if administered for six weeks.

Griseofulvin is not contraindicated in acute inflammatory ringworm and may indeed be recommended. Usually, however, its prescription is unnecessary and needlessly expensive.

Failures of treatment suggest that either the initial diagnosis is wrong or that the griseofulvin is being inadequately absorbed. Increased blood levels can be obtained by doubling the dose or taking the tablets with a fatty meal. (Concomitant phenobarbitone treatment has been reported as reducing blood levels). True resistance of the organism to the drug is very rare. Interdigital infection may prove resistant even to systemic griseofulvin and is even now occasionally incurable.

Contraindications to the use of griseofulvin are rare. True allergy is uncommon, but administration is contraindicated in porphyria and not advised in pregnancy.

Ringworm of the Groin (Tinea cruris)

Treatment in the groin follows the same general lines as mentioned above. The groin, is of course, a sensitive area and Whitfield's ointment should be used at half its usual strength. Griseofulvin therapy is usually indicated since strains of fungus resistant to local therapy are now increasingly common in this part of the body.

Ringworm of the Body (Tinea corporis)

Misdirected application of fluorinated steroids to tinea pedis and cruris has caused an increased incidence of "metastatic" spread of fungus infection, often in an atypical form, to other areas of the body. It is difficult to recognize this phenomenon (called tinea incognito), but treatment with Whitfield's ointment and griseofulvin tablets in no way differs from that of classical tinea corporis and is usually effective after a month.

Ringworm of the Nails

This presents a special problem since the disease is completely resistant to local treatment. Griseofulvin by mouth is the only possible treatment, and on full daily doses fingernails take six months to be cured while toenails may prove resistant even to 18 months administration.

Removal of nails under cover of griseofulvin therapy increases the chances of success but it is doubtful whether treatment of toenail infection is justified except in the most exceptional circumstances.

Ringworm of the Scalp (Tinea capitis)

Ringworm of the scalp is now comparatively rare. It may be due

to several types of fungi. All are resistant to local therapy, but fortunately all respond rapidly to griseofulvin by mouth for six-weeks in full dosage for adults; in childhood griseofulvin syrup (Fulcin), at a dosage of 10 mg per kg body weight, may be preferred.

Animal Ringworm

Animal ringworm in man is usually acutely inflammatory but the profuse pustulation is reactive and not usually due to secondary bacterial infection. The reaction is always self-limiting but the resultant scarring may be severe. Treatment with,

(1) Oral griseofulvin is usually indicated and is probably most effective in the early stages of the disease and in the prevention of development of further lesions.

(2) Potassium permanganate compresses will dry out the acute pustular phase, and,

(3) Whitfield's ointment can be applied in cases where inflammation is less acute.

(4) A real case may be made out for using systemic steroids as well as antifungal therapy in this condition. They would help reduce the inflammatory response and reduce the final scarring—a point of particular importance when animal ringworm of the scalp can result in permanent hair loss.

I have not mentioned the vast array of topical fungicides available as proprietaries; this omission is deliberate in that none is more effective than Whitfield's ointment. The least irritating of these proprietary preparations is probably tolnaftate (Tina-derm cream). Such a prescription may be justified if there is real doubt about the actual diagnosis since misdiagnosed eczema and pityriasis rosea are frequently aggravated by application of Whitfield's ointment.

PITYRIASIS VERSICOLOR

Pityriasis versicolor (*Tinea versicolor*) is a common disease which mainly affects the upper trunk. It is due to a fungus which does not metabolize keratin, and therefore is not susceptible to griseofulvin. It responds well to one daily local application of Whitfield's ointment over about six weeks. Patients usually dislike the prolonged application of greasy preparations over the trunk and find a daily application of 20% sodium thiosulphate in a 1% cetrimide solution just as effective and much more cosmetically acceptable.

There are two difficulties with this disease: firstly, the high incidence of relapse, and, secondly, residual depigmentation of sites of infection. Relapse can be prevented if the patient is instructed that daily applications for six weeks will produce apparent cure but a further six weeks' application to the apparently healed area is necessary to prevent recurrences. The apparent depigmentation of skin following infection can be cleared by encouraging the patient to sunbathe or otherwise apply ultraviolet light to the area during the course of treatment.

CANDIDIASIS

Candidiasis or moniliasis is due to a yeast type of fungus and does not respond to anti-ringworm therapy. In the past vividly coloured dyes were used in the management of cutaneous and mucous membrane infections. They have little place in outpatient practice today since equally effective and cosmetically superior alternatives exist.

As a routine in treatment,

(1) Seek for an underlying cause for the infection. In contradistinction to cases of recurrent boils an underlying cause is commonly found, such as diabetes, renal glycosuria, pregnancy, or drugs, such as broad-spectrum antibiotics or the contraceptive pill.

(2) In cases of infection in the genital area it is advisable to treat the conjugal partner concurrently.

No effective and safe routine systemic therapy for cutaneous candidiasis exists. Topical therapy is therefore most important.

(3) Nystatin in ointment form is usually but not always effective. Amphotericin B in lotion form is probably more acceptable in intertriginous areas.

(4) Oral nystatin and amphotericin preparations are available and should be given concomitantly when perineal infection is a problem. They are not absorbed but will effectively clear the yeast from the bowel.

(5) Co-existing vaginal infection can be dealt with by pessaries of nystatin inserted twice daily for 10 days.

(6) Frequently candida acts as a secondary invader in areas of intertriginous maceration. Bacterial infection and eczema may co-exist here and therapy combining an antimonilial drug, antiseptic agent or antibiotic, and a steroid is justifiable. Nystaform HC (nystatin, hydroxyquinolone, and hydrocortisone) and Triad Cortyl (nystatin, neomycin/gramicidin and triamcinalone) are the preparations most commonly used for this.

ERYTHRASMA

Erythrasma of the groin is difficult to diagnose without experience or the use of a Wood's light. It responds well to broad-spectrum antibiotic ointments (chlortetracycline or Aureomycin) but fortunately also to Whitfield's ointment.

A local application of clotrimazole (Canesten) cream has recently been released claiming a high percentage cure rate in all the above mentioned fungus infections of the skin. Clinical trials appear to have substantiated this claim, and, if allergenicity is low, this preparation should prove invaluable to the general practitioner and make differential diagnosis a slightly more academic pursuit.

Viral Infections

Viral infections continue to pose particular difficulties in that no antiviral antibiotics are as yet generally available for use in skin diseases.

HERPES SIMPLEX

The acute attack of herpes simplex is still best allowed to run its course, being dabbed occasionally with spirit to help dry up the vesicles. Local steroids are contraindicated because of the risks of spreading the infection particularly to the eyes. Local antibiotic creams (chlortetracycline, or neomycin) will prevent secondary bacterial infection.

A preparation of 10% idoxyuridine in dimethyl sulphoxide is effective in aborting an attack but its potency is short-lived, the drug is expensive, and not as yet on general release. Recurrent attacks usually occur in roughly the same site. Several treatments have been devised based on the presumption that the virus lies dormant in the skin. Grenz ray therapy has its devotees, and daily irradiation of the skin with fluorescent light after application of 5% neutral red solution has been reported as being helpful.

More recent work suggesting that the virus lies dormant in nerve ganglia would cast some doubt on the efficacy of the above methods of treatment.

HERPES ZOSTER

Calamine lotion and pain-relieving drugs such as chlorpromazine are all that should be required in uncomplicated cutaneous zoster. Intramuscular injections of adrenocorticotrophic hormone has been recommended as helping to prevent postzoster neuralgia, though the well-recognized damaging effects of steroids in other viral infections should prompt extreme caution.

WARTS

In treating warts, remember:

- (1) 30% of them will clear spontaneously in six months.
- (2) Protective immunity takes about six months to develop—destroying warts too early may result in rapid reinfection.
- (3) A simple wart paint: 2% formalin, 5% salicylic acid, 10% podophyllin, and collodion to 100 applied regularly will clear up over half of warts of all types in three months.
- (4) Carbon-dioxide snow therapy is an easy technique for use in general practice. The kit is cheap and the Sparklets are readily available.
- (5) Only complicated or resistant warts should be referred to hospital, where liquid nitrogen therapy is now the treatment of choice.
- (6) Electrodestruction and curettage have the advantage of speed and "once only" consultation. The cure rate, however, is not exceptionally high and the resulting scar is permanent and may be disabling.

GENITAL WARTS

Genital warts are probably now the commonest of the sexually transmitted diseases. They are, however, largely ignored by venereal disease publicity campaigns and patients are usually unaware of their infectivity. By and large the more florid the vegetation the easier is the disease to treat.

- (1) Ensure your patient is not pregnant; if she is, delay treatment until after delivery.
- (2) Apply 20% podophyllin in benzoin tincture on a cotton wool stick. The application should be both to the warts and to the healthy skin at their bases.
- (3) Vaginal and anal warts, if present, can be similarly swabbed with the help of an appropriate speculum.
- (4) Allow the application to dry before the patient dresses.
- (5) Instruct the patient to wash the involved area after 12 hours.
- (6) Warn of the possibility of severe inflammation.
- (7) See your patient weekly and repeat treatment as necessary.

MOLLUSCUM CONTAGIOSUM

Molluscum contagiosum is usually treated by pricking liquified phenol into each lesion by a sharpened stick. It is a painful process and in children prior sedation with a high dose of trimeprazine is often helpful.

When lesions near the eye are seen in small children general anaesthesia has been advocated. Before embarking on this major step daily application of 25% podophyllin in benzoin tincture for three weeks may be tried and is often effective.

Parasitic Infestations

SCABIES

When treating scabies it is as well to remember that a contact may be suffering from the disease, be infectious, and yet for the initial two-three weeks of the infestation be free of symptoms. Benzyl benzoate application *B.P.* is the cornerstone of therapy. Failures in treatment are due to one or other failure in technique rather than due to resistance of the parasite to the drug.

Technique

- (1) Prescribe 120 ml of benzyl benzoate application *B.P.* per member of the household regardless of whether all have symptoms. Real difficulties arise in prescribing for groups of individuals outside hospital practice where individual prescriptions

are mandatory and several general practices may be involved within a domestic group. A strong plea could be made for some relaxation of prescribing rules in this type of case.

(2) On the first evening each member of the group has a bath and scrubs the skin well with soap and water. The scrubbing should be most vigorous over sites of major involvement as this opens up burrows and makes further treatment easier. The skin is dried and painted with benzyl benzoate using a small paint brush; the area from neck to soles of feet should be covered. Thorough painting is essential, special attention being paid to the genitalia and sites of itching—it is best if the husband gets his wife to help him, and vice versa. The patients then go to bed in used night attire and bedding. On rising next morning a further application of benzyl benzoate to the hands is advisable.

(3) The next night the above treatment is repeated and the patients retire in clean night clothes and bedding. Linen and sheets should be washed but no elaborate fumigation of clothing is indicated. Itching usually persists for a few days thereafter but will respond well to crotamiton cream.

Remember that benzyl benzoate is irritating and more than two applications should be unnecessary. Babies and patients with eczema should be treated with 1% gamma benzene hexachloride cream. A 50-g tube per individual will suffice and application is in the same manner as laid out above. In babies the face and scalp can be infested and must also be treated.

ANIMAL PARASITES

Particularly mange mites, but also several less well-known parasites such as forage mites, will commonly cause an allergic papulopruritic eruption (papular urticaria) in human contacts.

Treatment of the animal with gamma benzene hexachloride shampoo and powdering of its box or basket will effect fairly immediate relief.

HEAD LICE

Head lice usually respond to a single thorough massage of the involved scalp with a 2% gamma benzene hexachloride solution in a detergent base. All members of the family group should be so treated. Secondary infection may be so severe as to necessitate administration of a systemic antibiotic. Failures in treatment are becoming more frequent in certain areas of the country and evidence of true resistance of the parasite to the insecticide is now available. Malathion (Prioderm) is the insecticide currently recommended for the resistant strain, which has been appropriately dubbed "super louse."

PUBIC LICE

Treatment of pubic lice is fairly easy: one application of 1% gamma benzene hexachloride cream is usually effective. Sexual contacts must also be treated.

BODY LICE

Body lice are very rare nowadays. Treatment of clothing and bedding with gamma benzene hexachloride powder (obtainable at most garden centres) is essential. A bath and application of gamma benzene hexachloride cream to the patient completes the treatment.

Inside Europe

Medicine in the Common Market

(Concluded from last week)

*Young Hospital Doctors

Great Britain

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British Medical Journal, 1973, 4, 478-482

When it became clear that the United Kingdom was probably going to enter the Common Market, the B.M.A. established a committee to study the implications which entry to the Community would have for the medical profession and health care in this country. In parallel with this the Hospital Junior Staffs Group Council set up a special study group, since it seemed that the principles behind Articles 48 and 57 of the Treaty of Rome were likely to affect younger doctors more than those who had been long established. At its Annual Meeting in 1972 the

B.M.A. welcomed the implementation of the mutual recognition of diplomas, and the Junior Members Forum has proposed that the present facilities for exchanges of undergraduate and postgraduate students, as well as those of established doctors, should be extended. We think that financial problems could be overcome by exact exchanges of posts, together with accommodation mortgages and other expenses, and that the linguistic problems could largely be overcome with the help of language laboratories. Facilities for postgraduate exchanges already exist in some specialist centres and these should be extended.

Similar Problems

The problems facing younger doctors in this country and in the other E.E.C. countries are very similar.

The first problem is to obtain adequate and recognized training. The second problem to solve is the question of terms and conditions of service. Then there is the problem of the cost of living and the fact that in the major specialties there are too many aspirants chasing too few established posts. But if the medical curriculum was widened I feel that many of manpower difficulties would be solved. If under-

*At the final session the chair was taken by Professor J. L. Portós, Professor of Medicine, Paris.