

Community Dermatology



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HOW WE MANAGE PYODERMA IN THE COMMUNITY

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Introduction

Pyoderma is a term used to describe a number of skin and soft tissue infections caused by pyogenic bacteria. *Staphylococcus aureus* and group A β -haemolytic streptococci such as *Streptococcus pyogenes* are the most commonly incriminated bacteria. The definition of pyoderma includes infections such as impetigo, ecthyma, folliculitis, furuncle, carbuncle, erysipelas, cellulitis and infected insect bites.

In addition, common skin infestations such as scabies and pediculosis capitis can be secondarily infected and, therefore, present like a pyoderma. Pyoderma is common in the Tropics and there is a higher incidence associated with low socio-economic conditions, poor hygiene and lack of availability of water. It has a variety of clinical presentations, which are briefly described below together with their aetiology.

Aetiology and Clinical Presentation

Impetigo and *ecthyma* are the commonest bacterial skin infections in the Tropics,



Fig. 1: *Impetigo*

Photo: Beverley Adriaans

particularly among school-age children. They are highly infectious and, therefore, person to person spread of infection may be a problem. The two conditions differ only in the extent of infection – impetigo

CONTENTS

REVIEW ARTICLES		
How We Manage Pyoderma in the Community	Mahreen Ameen & Beverley Adriaans	17
Sweet Evidence: Honey and Wounds	Neil H Cox	20
Epidemiology and Management of Common Skin Diseases in Children in Developing Countries (WHO)	Review by Neil H Cox	22
PRACTICAL THERAPEUTICS AND CARE		
How I Use Dapsone	Kufekisa Mukelabai	24
Nursing Management of Lymphoedema In Tanzania	Sara Burr	25
QUIZ		
Scaly Skin: Is It Fungal?	L Claire Fuller	26 & 31
REPORT		
Income Generating Activities through Occupational Therapy at RDTC, Tanzania	Herma Grossmann & Terence J Ryan	27
RESEARCH REPORTS		
RDTC, Moshi, Tanzania	Wilson Maira; Jamil Kajuna; Riziki Mwangolo & Paul Chalema	27
TEACHING AIDS		
Herpes Zoster – Shingles	Teaching Aids at Low Cost	29



Fig. 2: Ecthyma

Photo: Beverley Adriaans

(Figure 1) affecting the superficial part of the skin epidermis, whereas ecthyma (Figure 2) extends deeper and affects the dermis. Impetigo may initially present with flaccid blisters (bullous impetigo) (Figure 3), but later impetigo and ecthyma look very similar when they both develop honey-coloured crusts, which consist of dried serous exudates. However, ecthymas can also result in punched out ulcers.

Children of any age may develop impetigo, although children between the age of two and five are most commonly affected and bullous impetigo often affects the neonate. Impetigo also commonly occurs as a result of secondary infection of eczema when it is known as impetiginized eczema. Eczema patients are particularly susceptible as they carry heavy loads of *S. aureus* on their skin and by scratching their skin permit entry of bacteria.



Fig. 3: Bullous impetigo

Photo: Beverley Adriaans

Adults with leg ulcers may also develop secondary impetiginization.

Impetigo may also affect those with no previous history of skin disease when it occurs following the entry of bacteria into the skin after superficial skin damage or abrasion, which can be very minor. Impetigo is self-limiting, usually taking between 2 to 8 weeks for infection to clear, although in malnourished children healing can be delayed.

Folliculitis refers to a pyogenic infection that remains localised to the hair follicle and presents

with pustules. When the infection extends down to the subcutaneous tissue it is referred to as a *furuncle* and this is a larger purulent lesion. When more than one follicle is involved, it is referred to as a *carbuncle* and these are often tender as they contain a large amount of pus and may have several draining sinuses.

Cellulitis and **erysipelas** are both infections of the skin and soft tissues – erysipelas (Figure 4) being more superficial and usually well-defined. Cellulitis is a deeper infection and usually poorly defined (Figure 5). They have similar clinical features characterised by pain, erythema and swelling. *Staphylococcus aureus* and group A β -haemolytic *streptococcus* are commonly implicated. Both cellulitis and erysipelas are much less common in the Tropics than impetigo and ecthyma. They, in fact, cause greater disease burden in developed countries. They often affect the limbs and in the Tropics patients with lymphoedema (from lymphatic filariasis, for example) are at risk of cellulitis.

Treatment

Pyodermas should be treated promptly to minimise the risk of spread to other members of the community and also to prevent bacteraemia or the risk of glomerulonephritis.

- The affected area should be cleaned with soap and water, which

will prevent the spread of infection as well as aid the application of a topical antibiotic. When there is crust present this needs to be removed with oil, warm water or saline. Wet gauze placed on the crusts for 5-10 minutes will soften them facilitating their removal.

- Potassium permanganate solution is also helpful in removing the crusts, drying out the serous exudates and is a good antiseptic. It is available as crystals and tablets for dissolving in water. When diluted, the water becomes a light pink colour (not purple) and this corresponds to a dilution of about 1:8000, which is adequate.
- Topical antibiotics have been shown to be as effective as oral antibiotics when the disease is localised. They should be applied to the affected areas two or three times daily and usually 3 days is sufficient. There is a reduced risk of bacterial resistance if used for less than 2 week periods. The following may be used if available:
 - 2% mupirocin ointment
 - 2% fusidic acid ointment
 - Tetracycline ointment.
- Antiseptics, such as aqueous 0.5% gentian violet paint or hydrogen peroxide cream applied to the affected area two times daily for 3 days are very effective alternatives to antibiotics. Povidone iodine and chlorhexidine have anti-infective properties, although povidone iodine is superior.
- Oral antibiotics are sometimes required, for example, in the case of widespread bullous impetigo. Cloxacillin can be used at a paediatric dose of 62.5mg qds or adult dose of 500mg qds usually for one week.
- Cellulitis and erysipelas require at least oral antibiotics and sometimes necessitate admission into a hospital for intravenous drug therapy. It is important to be able to recognise this when infection spreads rapidly and the patient is unwell with a fever. One mega-unit qds IV/IM benzylpenicillin is required, usually 10-14 days for cellulitis and one week for erysipelas. Oral antibiotic therapy may be adequate if there are no complications associated with the infection.



Fig. 4: Erysipelas

Photo: Beverley Adriaans



Fig. 5: Cellulitis

Photo: Beverley Adriaans

- In lymphoedema patients, maceration of the skin between the toes predisposes to infection with cellulitis. Therefore, attention should be paid to foot care, and daily washing followed by the application of an emollient or oil is important. Whitfield's ointment is effective in treating toe web maceration.
- Education of patients and parents involves instruction of the importance of:
 - skin washing, especially following abrasions or cuts to the skin.
 - prevention of insect bites by the use of mosquito nets, if

available, or wearing clothes which cover exposed limbs.

- effective treatment of any primary skin disease or infestation such as eczema, scabies or pediculosis which can lead to secondary skin infection.
- treatment of all infected members of a family at the same time to minimise risk of reinfection.

Prevention

Improving poor socio-economic conditions and poor hygiene, as well as the prevention of trauma and avoidance of insect bites and damp environments, would lead to a decrease in prevalence of pyodermas. The availability of fresh, clean

water and adequate bathing facilities, reduce the prevalence of pyodermas considerably.

Further Reading

1. Adriaans B. The Pyodermas. In *The Challenge of Dermato Epidemiology*. Williams H. and Strachan D. (Eds). CRC Press 1997; 239-253.
2. Heagerty A. Cellulitis and Erysipelas. In *Treatment of Skin Disease*. Lebwohl M., Heymann W., Berth-Jones J. and Coulson I. (Eds). Mosby, 2002; 109.
3. Burd R. Impetigo. In *Treatment of Skin Disease*. Lebwohl M., Heymann W., Berth-Jones J. and Coulson I. (Eds). Mosby, 2002; 299.

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SWEET EVIDENCE: HONEY AND WOUNDS

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Introduction

Some time ago, I received an e-mail from Dr Buxton, Editor of *Community Dermatology*, regarding a possible series of articles on readily available skin treatments, which read:

'.....Then Neil Cox could give 'evidence based' reasons for using them. I think he might find it rather a challenge to do this for honey and banana leaves for wounds -but no doubt the virtue of saline for pyoderma would be easier to establish!'

Well, there's nothing like a challenge.....

So Where is the Literature?

My main experience of honey and bananas (not necessarily together) has been as foods. I have not tried eating banana leaves but I have eaten fish cooked in them, presumably to keep the fish moist rather than to add flavour. Honey treatment is mentioned in the Bible and in the Koran, and (almost as long ago) I once worked for a surgeon who did use honey on leg ulcers – however, none of this is really good evidence. The theory to justify use of honey, at that time, was that it has so much sugar content that osmotic forces remove water from any bacteria that are colonising the ulcer, thus desiccating them and preventing infection. (Osmolar forces mean that, provided there are spaces large enough to allow passage of water, water will move through a membrane separating a solution with low salt or sugar concentration into a solution of higher concentration – such as from bacteria into honey. A solution that does this is termed 'hygroscopic').

In fact, the effect of honey on bacteria has been shown to be greater than the effect of laboratory-manufactured solutions of the same osmolar concentration, and honey also alters healing of clean wounds, so any role of honey is more complex than simply a hygroscopic effect.

I started to check old textbooks and modern electronic Medline for information. Strangely, Dr Buxton's prediction was wrong – other than anecdotal comments about the value of mechanically washing wounds to remove bacteria, information

on honey and banana leaves was far easier to identify than relevant information on saline. Within 6 days of getting the e-mail I found a newspaper article about the value of honey for treating tumours, with different components doing different things – propolis and caffeic acid slow the progression of tumours, honey itself reduced metastasis, and bee venom shrank tumours if injected into them (I would probably shrink from injections of sting venom as well). So, there was information out there to be found.

In this article, I will mention saline but concentrate on honey – banana leaves and other vegetables will be discussed in a future article.

Saline

Publications that use the word 'saline' run into tens of thousands, but it is difficult to find articles specific to wound treatment. Briefly, picking out some relevant ones, saline soaked-gauze was as effective as silver sulphadiazine cream in treating fresh partial thickness burns in one study, but less effective in another. An antimicrobial (0.057% sodium hypochlorite) was compared with saline in experimental wounds and was associated with lower bacterial counts and faster healing. Aloe vera compared with saline appears to have an anti-inflammatory effect, with faster healing times than saline alone. Overall, it would appear that a dilute antiseptic is likely to be more effective than saline alone, but the latter is better than nothing.

Honey: The Literature

Using 'Honey' and 'Wound' in Medline from 1996 to mid-2005 scored almost 100 hits, including use in animals and experimental evidence of antibacterial activity. A systematic review documented honey as superior to polyurethane film, potato peel, amniotic membrane or silver sulphadiazine, but numbers in all studies were small and the confidence in these comparisons was low.¹ A further, 2006, paper by Molan has summarised



Weighing the benefits - honey beats normal saline for wounds

Photo: Neil Cox

the evidence in favour of using honey;² there is also a useful clinical update by the same author³ and briefer reviews in journals aimed at the nursing profession.⁴ Molan's summary of evidence cites 17 randomised controlled trials of clinical use (total 1965 patients), 5 other clinical trials (97 patients) and 16 experimental animal studies (533 wounds). Some of these have involved treatment of different wounds at different sites on the same patient, as a form of internal control. Most of the clinical studies have been performed on burns, with a few on surgical wounds. It should be remembered that the tissue damage and potential for healing and scarring may be different depending on the type of wound, depth of wound, presence of infection, etc. Some of the positive studies are discussed below but there are some reservations about interpretation of these impressive sounding numbers. One single trial, involving 900 patients with burns,⁵ used antioxidants and polyethylene glycol to enhance the effects of honey, used other treatments such as soframycin concurrently, and did not involve any statistical analysis. I mention this, not to be critical of that study, but to make the point that the other 16 randomised controlled trials were all relatively small (average 63, median 50, patients). Similarly, the uncontrolled studies were mainly small (as few as 6 patients in one series).

Benefits of Honey

Taking these reviews together, we can be fairly confident that honey is superior to silver sulphadiazine for burns – there are

several adequately powered studies and the evidence favouring honey is consistent. We can also be moderately confident, in situations where prevention or treatment of infection is the major issue (such as catheter sites), that antiseptics (povidone-iodine) or antibiotics (mupirocin) are probably at least as effective as honey. We have already discussed that, at least for burns, honey appears to be superior to polyurethane film, potato peel or amniotic membrane. For application to split skin grafts, honey dressings seem to be equivalent to hydrocolloid dressings and superior to paraffin gauzes or saline-soaked gauze in healing time, tendency to infection, and degree of pain. In chronic leg ulcers, when used with compression bandaging, honey appears to be more comfortable, and associated with less odour, than 'standard' treatments under compression. Honey is also better than EUSOL (University of Edinburgh Solution of Lime) for treating abscesses (however, EUSOL is not now used in the UK as it is often irritant and may actually decrease wound healing). In severely infected post-surgical wounds, honey proved more useful than povidone-iodine.

There are several animal studies, and two main issues – antibacterial effects and wound healing effects. In experimentally infected wounds in mice, 30 – 100% honey completely inhibited growth of a variety of bacteria and many are inhibited, even at 10% dilution – the most sensitive were *Escherichia coli* and *Pseudomonas spp.* *Staphylococcus aureus* was less sensitive, and usually requires at least a 30% dilution for reliable killing (remember that wound exudates will cause additional dilution). The antimicrobial effect decreased with prolonged storage. Honey is also associated with improved wound healing in a number of experimental rodent models of thermal burns. Wound contraction is faster than treatment with saline, for example, in experimental excision of skin.

Honey: Adverse Effects

No active agent is without its problems. Applying honey, and keeping it in contact with a wound (especially where there is significant exudate) can be difficult. As exudate both dilutes honey, and also inhibits some beneficial factors, the ideal approach is a honey-soaked gauze covered by a secondary dressing to absorb exudate. Honey can be diluted with clean water or mixed with emollients (it remains effective down to about a 30 – 40% dilution) and is then easier to

apply, as it is more liquid in form, rather than sticky. It is best applied under some form of non-stick dressing – banana leaves, discussed in a future article, are a possibility. If gauze or cotton bandages are used without a non-stick layer then they may need additional application of emollients, or wetting, to prevent the dressing adhering to the wound as the honey dries.

Although probably rare, it should be noted that viable *Clostridia* spores can survive in honey – this risk applies especially to 'raw' honey, or in situations where either the honey or the wound is likely to get contaminated from soil. As a result, honey may cause, or fail to prevent, tetanus or gas gangrene.⁶ Diluting it may therefore also introduce some risk, if this is not performed in clean conditions. Sterility can be achieved by irradiation of honey but this will not be a practical option for most readers.

Finally, there is a small risk of allergy to bee products. This is most likely when the honey is collected from a venomous species and when the collection method is crude, as the honey obtained will often contain intact or fragmented dead bees.

How Does Honey Work?

The reason for the benefit of honey is probably multifactorial.¹⁻⁵ As well as the hygroscopic effect discussed earlier, many other mechanisms probably operate. Honey has a low pH of around 3.6 (acidic) and, as a result of this, it produces hydrogen peroxide when diluted (deliberately or by exudate). Hydrogen peroxide itself is used as a wound treatment with antimicrobial effects. This process involves chemicals known as inhibines and hydroxyl radicals, which debride and are antibacterial.⁷ Indeed, honey dressings have useful antibacterial activity against both Gram-positive and Gram-negative bacteria; in one study, 36/40 patients with a variety of infected burns (staphylococcal, streptococcal, *Pseudomonas*, *Proteus* and others) achieved negative bacteriology swabs within a week. Antibiotic-resistant *Staphylococcus aureus* species are also potentially susceptible to treatment with honey. The acidity may be important in its own right, as it affects several bacterial genes.

Other specific chemicals within honey include various ionic elements (calcium, phosphorus and fluoride), plant chemicals

(phytochemicals) and, also, possible nutrients for wounds such as fructose.

These may all have direct antibacterial, anti-inflammatory, antioxidant, immunological or pro-wound healing effects. The specific type of honey is important for maximum effect, although most locally-produced honey is useful as well, and (as briefly discussed earlier) any bee honey is more effective than artificial attempts to mimic it by making solutions with the same pH, osmolality, etc.

Thus, honey contains chemicals that are important not only for healing but also in reducing slough, bacteria and odour.

Propolis, Honeycomb and Pollen

Propolis⁸ is best thought of as 'bee glue'. It is collected by bees from buds of plants or from the bark of some trees, and it used to repair cracks in nests and to coat any small animals that invade the hive. In common use it is less important than honey, simply because the amount available is small, but it also appears to have useful anti-inflammatory, antimicrobial and wound healing properties due to flavonoid chemicals and phenolic acids. It has been used in many illnesses, internal as well as skin conditions. It has antimicrobial actions against Gram-positive bacteria and against yeasts, especially *Candida albicans*, and seems to be particularly useful in healing some mouth ulcers and possibly preventing dental caries due to its activity against various oral streptococci. In genital type II herpes simplex infection, a single-blind randomized trial, involving 90 patients in three groups, showed that propolis was faster in symptom relief and better in reducing secondary infection compared with acyclovir or placebo.⁹ However, one study of antimicrobial effects against *Streptococcus viridans* (a mouth organism) showed that honeycomb, honeycomb lids and pollen were all as active as propolis. This may be because flavonoids are plant chemicals, rather than being made by bees, so all of these agents are likely to contact similar chemicals.

Other Bee Products

Finally, although not exactly an effect of honey itself, there are reports of bee larvae being useful in wound management. Their role is uncertain but may be related to dissolving and consuming slough. A similar role is proposed for greenfly maggots which are available on a commercial basis in the UK, but these have to be bred so that they

Honey and Wounds

are bacteriologically sterile. As bees do not feed from open wounds or rotting material, and their larvae feed on honey, it may be that bee larvae are adequately sterile to be used on wounds. However, one study of bee larvae also described them, and / or honey, as beneficial in a huge range of problems including toothache, measles, period pains and impotence, with little firm evidence for any of these. This idea must be viewed as unproven.

The Messages

There is good evidence that honey is superior to saline-soaked gauze, and to some other traditional agents (e.g., potato peel) and to sulphadiazine as wound dressings in burns. Honey is probably also useful in many other skin wounds, although the evidence in many of these situations is less strong. Even if healing is not achieved, there are reported benefits from honey in terms of reducing pain and odour from wounds. Honey should be used with careful monitoring, where the

primary problem is an infected wound, and it is important to be aware of the rare possibility of clostridial infections. The evidence to support honey as a dressing, in general, is much stronger than for other 'traditional' dressings.

Acknowledgement

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References

1. Moore O.A., Smith L.A., Campbell F., Seers K., et al. Systematic review of the use of honey as a wound dressing. *BMC Complementary and Alternative Medicine* 2001; **1**: 2.
2. Molan P.C., The evidence supporting the use of honey as a wound dressing. *Lower Extremity Wounds*. 2006; **5**: 40–54.
3. Molan P.C., Betts J.A. Clinical usage of honey as a wound dressing: an update. *J Wound Care* 2004; **13**: 353-356.
4. Subramanyam M. Addition of antioxidants and polyethylene glycol 4000 enhances the healing property of honey in burns. *Ann Burns Fire Disasters* 1996; **9**: 93–95.
5. Dunford C. The use of honey-derived dressings to promote effective wound management. *Professional Nurse* 2005; **20**: 35–38.
6. Mirkin G. Side effects of raw honey. *JAMA* 1991; **266**: 2766.
7. White J.W., Subers M.M., Schparts A.I. The identification of inhibine, the antibacterial factor in honey, as hydrogen peroxide system and its origin in a honey glucose oxidase system. *Biochem Biophys Acta* 1963; **73**: 57–70.
8. Ghisalberti E.L. Propolis: a review. *Bee World* 1979; **60**: 59–84.
9. Vynograd N., Vynograd I., Sosnowski Z. A comparative multi-centre study of the efficacy of propolis, acyclovir and placebo in the treatment of genital herpes (HSV) *Phytomedicine* 2000; **7**: 1–6.

EPIDEMIOLOGY AND MANAGEMENT OF COMMON SKIN DISEASES IN CHILDREN IN DEVELOPING COUNTRIES

**World Health Organization
Discussion Paper WHO/FCH/
CAH/05.12**

Comments by:
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This document is important for anybody providing, planning or administering dermatological healthcare for children in resource-poor countries. Its two parts cover epidemiology and aetiological issues (climate, hygiene, modes of transmission, etc.) and disease management (including individual, community and broader public health issues).

The need to update some recommendations (such as the WHO 'Essential Drugs List' for dermatology), and gaps in the evidence, are highlighted.

Data Sources

Data sources include a systematic review of electronic databases since 1970, WHO data, information from specialised dermatology centres and non-specialised health centres, and opinion from experts

on international dermatology health care. Information is included from numerous countries and communities, but it is apparent that high quality, recent, age-specific prevalence studies are often lacking. There are also limitations of diagnosis and classification – for example, the term 'dermatitis' has been applied to many conditions.

Common Skin Diseases

The emphasis is continually on the implications for public health and on interventions that have a meaningful benefit for individuals or communities. Thus, although the diseases considered are those perceived as the most important (pyodermas, ectoparasitoses, superficial mycoses, molluscum contagiosum / viral skin infection, dermatitis / other non-infective processes, HIV-related skin diseases), some of these can be (almost) dismissed. Molluscum contagiosum is common but self-limiting and causes little morbidity, so does not pose a great problem in terms of the objectives of this review. The same applies to most superficial mycoses (tinea capitis is the exception) and to most ectoparasitic diseases other than scabies (a massive problem). The prevalence of atopic eczema is low - although constituting a major problem for those who have

it (and for specialist centres), it has lower importance in a wider context. Skin disease is probably common in children with HIV but comparisons with children without HIV from the same area are limited. Pyodermas, scabies and tinea capitis (all of which involve person to person spread) are, thus, the most important dermatoses. Tinea capitis is very common and highly contagious but, with the exception of the (now rare and geographically localised) favus type, causes relatively little harm to the individual or to the community. It can become secondarily infected, but with a much lower frequency than occurs in scabies. It is impossible to discuss all the implications of the WHO manuscript here, and I will concentrate on scabies and pyoderma as the critical issues.

Scabies and Pyoderma

The major aetiological factors discussed are climate, hygiene, clean water, transmission of infections, concurrent skin diseases and other host factors. Some of these are difficult to separate – for example, pyodermas are commoner in hot weather whereas scabies transmission is higher in winter (but may relate to closer contact in overcrowded houses in winter, rather than being a direct effect of the climate). Poor hygiene, lack of fresh water

Diseases in Children in Developing Countries (WHO)



Scabies

Photo: Barbara Leppard

and overcrowding often coexist. The main infective dermatoses are all linked with lower socioeconomic status, but it is only really for impetigo that there is reasonable evidence that clean water and improved hygiene make a difference to prevalence.

Data which were viewed as representative for a region or country mostly suggest a prevalence of scabies of 1-5%, rising to about 10-20% in epidemics and as high as 50-75% where there is significant overcrowding. Interpersonal transmission is the major issue; hygiene and water supply are not related. Pyodermas, again based on apparently representative studies, have a prevalence in children of about 5-10% (or higher, in hotter and more humid climates). By contrast with scabies, in which the prevalence in adults is generally higher than that in children in the same community, pyodermas have a higher prevalence in children than in adults.

Important consequences of these disorders are the risk of a secondary disorder, and the difficulties and costs of treatment. Data on costs is scanty, but a Mexican study is cited in which the mean cost of treating scabies was 8 days off school and US\$24, and 15 days off school and US\$52 for pyoderma (the mean daily wage being US\$6). This is far greater than the cost of treating disorders such as conjunctivitis or water-borne infections; the point is made that these high costs correlate with the fact that 70% of treatments prescribed by health care workers were inadequate. With regard to secondary disorders, the most important is that scabies is frequently complicated by subsequent bacterial infection. In community terms, scabies underlies about 25-50% of pyodermas, either in the form of superinfection in individuals with scabies or by transmission of pyogenic infection from those

with infected scabies to unaffected persons. These risks increase in areas where there is a high prevalence of scabies.

In most areas, pyodermas are usually streptococcal or mixed streptococcal / staphylococcal infections. There are few trials of antibiotic therapy examining comparative efficacy between agents, or versus antiseptics. There is some evidence that soaps and hand washing reduce the prevalence of impetigo – ordinary soap seems to be as good as soaps

that contain antiseptic agents. Severe invasive streptococcal infections are rare but are a major cause of septicaemia in young infants in some areas; more commonly, *Staph. aureus* is the cause of sepsis in neonates. The commoner, although still rare, complication of streptococcal pyoderma is post-streptococcal glomerulonephritis (PSG), classically estimated to occur in about 2-4% of cases but probably actually developing in 0.1-0.2% (higher risk in young children and in specific populations such as Aborigines). For the individual, this risk is low, but PSG secondary to pyoderma accounts for about as many cases of PSG as occur due to throat infections, simply because pyoderma is so common. One action point in the document is that more data on skin disease specifically in young infants is needed.

In scabies, permethrin is probably the most effective topical agent but is expensive compared with many other agents commonly used. Oral ivermectin is effective although efficacy in formal studies is rather variable (55-95%), doses used have varied (100-400 micrograms/kg single doses), confirmation by microscopy has only been performed in some studies, and follow-up has been limited. There is an attractive logic to use ivermectin at adequate dose to kill scabies as part of programmes to treat onchocerciasis, but there are some concerns regarding toxicity, use in pregnancy and in young children, and a suggestion that a second dose is necessary for best results. Where there is a high community prevalence, education, extensive supervised topical therapy, and follow-up with re-treatment when necessary, appears to be the best method of control.

Training of Health Care Workers

Training of health care workers is vital. Some preliminary results of a project in Mali indicated that a series of short

training sessions, with supporting information led to a doubling in the number of patients having a clear diagnosis and treatment plan, and a 25% reduction in prescription costs. Further evaluation of methods to spread dermatology health care teaching into rural communities is necessary, particularly as the best approach may vary between different geographical settings.

This discussion document raises many ideas for improvement and identifies important gaps in knowledge – the ability to address these with adequately scientific studies may be a limiting factor, but the first step to solving the problems is to identify them. This WHO document does that.

WHO / CAH Acknowledgements

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HOW I USE DAPSONE

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Dapsone (4,4' - diaminodiphenylsulphone) was discovered in 1908 by Fromm and Wittmann at Freiburg in Germany. By the early 1940s, it was being used all over the world for the treatment of leprosy. Initially it was used in very low dosage, 10mg orally twice a week, gradually increasing to 100mg twice a week to reduce the chances of precipitating a lepra reaction. Since it is bacteriostatic rather than bacteriocidal for *Mycobacterium leprae*, it was given for a very long time (for life to patients with lepromatous (LL) and borderline lepromatous (BL) leprosy, and for 2-5 years for patients with tuberculoid (TT) and borderline tuberculoid (BT) leprosy).

There were difficulties in sustaining regular supplies of drugs over such a long period of time and drug resistance became a problem. Initially, this was secondary resistance, i.e., patients developed resistance while on treatment. Later, up to 50% of newly diagnosed patients already had dapsone-resistant leprosy (primary resistance), so something else had to be done. In 1982, the WHO Expert Committee on Chemotherapy recommended the use of Multi-drug therapy (MDT) for all types of leprosy. There are



Multibacillary leprosy. Multiple skin lesions with positive split skin smears
 Photo: Kufekisa Mukelabai/Barbara Leppard



Paucibacillary leprosy. Single anaesthetic patch with negative split skin smears
 Photo: Kufekisa Mukelabai/Barbara Leppard

now just two categories of leprosy as far as treatment is concerned. Paucibacillary leprosy, in which split skin smears are negative and multibacillary leprosy, with positive split skin smears.

The giving of rifampicin and clofazimine are supervised because these drugs

are expensive and have many more side effects than dapsone. It also means that the patients are being seen regularly and any problems can be dealt with quickly.

Dapsone is cheap and, on the whole, causes little in the way of side effects. The main adverse effects are haemolysis and methaemoglobinaemia. When patients are first started on treatment, haemoglobin and reticulocyte counts should be checked weekly. Once therapy has been established, and if there is no significant haemolysis, blood checks can be reduced to 3 to 6 monthly. Results of investigations should be recorded in the follow-up sheet, within the case-notes, so that any trends will become obvious.

Use of Dapsone in Rare Skin Disease

I have used dapsone mainly for the treatment of leprosy, but it can also be used in some rare skin diseases, e.g., subcorneal pustular dermatitis, dermatitis herpetiformis, chronic bullous disease of childhood, linear IgA disease and pyoderma gangrenosum (dose 1-2mg/kg daily). Its mechanism of action in these skin diseases is unknown but it is thought to be related to its effect on neutrophils. □

Current Recommended Treatment

	Paucibacillary leprosy	Multibacillary leprosy
Treatment	Rifampicin 600mg once a month (supervised) Dapsone 100mg/day	Rifampicin 600mg once a month (supervised) Clofazimine 300mg once a month (supervised) plus 50mg/day Dapsone 100mg/day
Length of treatment	6 months	12 months

Other Less Common Side Effects

Dapsone hypersensitivity syndrome	Non-specific	Serious
• Rash, fever, hypereosinophilia	• Nausea	• Peripheral neuropathy
• Exfoliative dermatitis	• Vomiting	• Hepatitis
• Hepatitis	• Fatigue	• Agranulocytosis
• Hypoalbuminaemia	• Dizziness	• Stevens-Johnson Syndrome
• Psychosis	• Weakness	• Toxic epidermal necrolysis (TEN)
• Death	• Anxiety	• Nephritis
	• Dyspnoea	• Pneumonitis
	• Headache	

NURSING MANAGEMENT OF LYMPHOEDEMA IN TANZANIA

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This article will outline a project which was carried out in Tanzania, illustrating how the management of lymphoedema and associated skin care, can be implemented worldwide.

Lymphoedema

The condition of lymphoedema is often chronic with no permanent cure. The patient needs to be able to manage the condition independently. In the developed world this management consists of skin care, manual lymphatic drainage (MLD) and multi-layer lymphoedema bandaging (MLLB), which are feasible with the resources and expertise near at hand. In many parts of the world, however, such resources and expertise are often limited.

Lymphoedema as a Result of Lymphatic Filariasis

Lymphatic filariasis (LF) is transmitted by a mosquito. When the female mosquito bites, to take a blood meal for egg development, a small worm (microfilaria), the parasite, finds its way from the mosquito through the skin and into the lymphatic system of the human. It lives in the lymph nodes and, as it grows up to 8 cm long, causes damage to lymphatic vessels. It is estimated that over one billion people live in 80 countries where this condition exists and are at risk of contracting the disease. One hundred and twenty million people already suffer from LF, with lymphoe-

dema. Access to health care is limited, as is money to buy supplies.

As part of the International Skin Care Nursing Group (ISNG), I was involved in teaching patients and health care workers about simple skin care techniques - to minimise lymphoedema development and reduce the likelihood of acute attacks following bacterial and fungal infections. These acute attacks mean that the individual's contribution to their community is often compromised, as they are unable to even get out of bed, let alone function normally or work.

Project Work

In April 2002, I met up with a team based at the National Institute for Medical Research in Dar Es Salaam, Tanzania. They are working as part of the Global Alliance for the Elimination of Lymphatic Filariasis and are responsible for co-ordinating the eradication programme for Eastern Tanzania. They also co-ordinate the village health care workers to administer the annual medication, that those living in endemic areas take for five years, to kill the microfilariae. Once the worms are dead, however, the symptoms of lymphoedema often remain due to the damage already done to the lymphatic vessels. The need for supportive care, in the form of skin hygiene, is therefore vital. The village health care workers are responsible for the health of the people in their villages and need to be aware of how they can help individuals to manage their condition.

The reason for my first visit was two-fold. Firstly, using questionnaires to assess how much patients already knew about their condition and their attitudes to the disease. This information would enable the development of a patient information leaflet re-enforcing the messages of LF management but in a culturally sensitive and appropriate way.



Fig. 2: Boy with raised leg

Photo: Sara Burr

My second goal was to start teaching the patients and health workers the principles of skin washing, drying and moisturising, using the resources around them, and to prepare an information leaflet. I already knew that it was unrealistic to introduce manual lymphatic drainage and multi-layer bandaging due to the cost and lack of expertise.

Results

From the questionnaire

The results from the initial questionnaires revealed the importance of environmental issues, e.g., access to water, moisturisers and cleaning materials, as well as lack of understanding of the disease process, which was commonly attributed to witchcraft or a punishment for adultery!

A typical rural dwelling relies on communal water supplies such as rivers, streams, bore holes or occasionally taps piped into the village, which will be intermittent and unreliable. Although buckets are available for sale in most villages, they are not commonly used for washing legs.

From observations

The results of the questionnaire and observations highlighted that most people did wash their skin daily, but did not pay particular attention to the skin folds of the lymphoedematous limb or in between the toes. They also left the skin to dry in the sun rather than drying carefully with a towel or clean cloth. Damp spaces between the toes can become macerated and present a route for fungal and bacterial infections. The key points to teach both the patients and health care workers were therefore:



Fig. 1: Health worker washing feet

Photo: Sara Burr

Lymphoedema in Tanzania

- Washing the limb to remove dirt (Figure 1)
- Drying well
- Rehydrating dry and cracked skin with emollients.

I worked with two members of the local medical research team who translated for me and visited patients in their homes - to demonstrate how to wash and dry their skin thoroughly. Subsequently, under my supervision, the team and local village health workers demonstrated washing, drying and moisturising the skin, along with leg elevation (Figure 2) and exercise techniques. This was more relevant to the patients, as there was no delay in translating and answering questions.

Patients asked many questions, e.g., what could be used if patients and health care workers could not afford flannels, towels or coconut oil. (Coconut oil can easily be made from indigenous coconut palms by boiling the coconut milk and reducing it to oil. This can then be used as an emollient.)

The severity of the lymphoedema varied greatly between patients, some with oedema reversible at night, others with major skin changes and irreversible oedema.

Every patient was asked to explain what specific pictures meant on a draft pictorial leaflet. After making alterations, a final version has now been produced (Figure 3), re-iterating the key messages demonstrated at each visit.

Conclusion

This field work has really only been a 'beginning' in relation to skin care and the management of lymphoedema in Tanzania. There are still unanswered questions. For instance, what is the best water temperature for washing the skin? Does it matter whether it comes from a bore hole or a river? Should the soap have an antibacterial component or are locally made soap or soap berries just as good?

One thing we do know, however, is that the patients who were revisited after 6 months, who were carrying out the sug-



Fig. 3: Patient information leaflet

Photo: Sara Burr

gested skin care routine, had improved quality of life and had experienced fewer acute episodes of fever and skin breakdown since paying more attention to their skin. Many patients stated that such simple techniques as washing and drying the skin thoroughly had made a dramatic difference to their life and their role in their community was once again restored. The role of the ISNG is to encourage and work alongside nurses worldwide, highlighting how skin integrity can be maintained and prevent the flare-up of many conditions, lymphatic filariasis being one of them. □

Quiz: Questions

SCALY SKIN: IS IT FUNGAL?

QUESTIONS

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Dermatology patients often present with scaly rashes. The following cases are common scaly rashes seen all over the world. We present them in quiz form... Have a go!

All illustrations are copyright of the Regional Dermatology Training Centre, Moshi, Tanzania

Case 1: What Is It?



Fig. 1

- This rash is symmetrical on backs of elbows, front of knees. And maybe in scalp
- Each patch is very well defined
- It may be itchy
- What is the diagnosis?
- What is the differential diagnosis?
- How will you treat it?

Case 2: What Is This?



Fig. 2



Fig. 3

- What is the diagnosis?
- What is the cause?
- What is the differential diagnosis?
- How would you diagnose it?
- What treatment would you use?

Case 3: What Is This?



Fig. 4

- Complaint: itchy patch on side of neck

Answers on Page 31

Report from The Regional Dermatology Training Centre (RDTC) in Moshi, Tanzania: Income Generating Activities by Rehabilitative Intervention through Occupational Therapy (OT)

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If anyone thinks of Occupational Therapy for patients affected by skin disease as making raffia baskets and papier maché pots stained with tar ointments, and weaving linen stained with emollients, then they have not experienced its role in the 21st Century. No longer do patients make such unpurchasable items, but the aim is rather income generation by selling goods needed by the community in which they live. It is an accepted fact, that meaningful activities are needed to keep mental health and well-being. Patients with skin disease are not to be looked at as needy patients, rather as people with their 'rights' of meaningful activities and/or suitable employment.

Occupational Therapists in Tanzania and Malawi

The Occupational Therapist at the RDTC took up the challenge to support clients, such as patients affected with albinism or xeroderma pigmentosum or those disabled by leprosy or lymphatic filariasis. At

the Regional Dermatology Training Centre, the appointment of an OT was such a success that it has been followed by a further appointment for Tanzania and one for Malawi, funded by the St. Francis Leprosy Guild. Not only are OTs in the position to assess disability and ability, but they are good at matching such ability to the needs of the community.

While in Tanzania, the OT for the Department of Dermatology at first focused on leprosy. Now there is a more comprehensive service for clients with disabling skin diseases.

The OT at RDTC first trains patients in their activities of daily living, for example, in co-operation with the patient, providing protective devices and adaptations against sun and mechanical damage. This damage can occur, for example, during cooking, washing, cleaning or farming.

The overall management goal is then to facilitate productivity and more self-reliance by food production, livestock keeping, tailoring/shoe making and other essentials.

Vocational Training: RDTC and the YWCA Rehabilitation Centre, Moshi

The RDTC initiated vocational training in co-operation within the Rehabilitation Centre at the 'Young Women's Christian Association' (YWCA) in Moshi Town, Tanzania, in the area of tailoring, shoe-

making and producing small orthopaedic devices. In both workshops, people affected by albinism are working indoors and it is planned that they, in turn, will train others so that they will be able to establish income generating activities in their own communities.

Today, the headings under which the rehabilitation is carried out are 'Income Generation' and 'Self-reliance'. It has become a necessary part of the management of disabling skin diseases, helping to make persons, once rejected, more accepted in their family and community.

The Occupational Therapist at RDTC

The OT at the RDTC is, therefore, facing great challenges in developing creative and innovative therapeutic approaches for clients affected by disabling skin disease! By increasing the number of persons trained to teach income generating activities, persons with impairments living in isolated communities will have greater opportunity to receive training in a number of skills of value to their neighbours. Helping others with different problems is illustrated by the programme teaching persons affected by albinism to make shoes in an environment shaded from the sun; these shoes made for persons such as those with neuropathy, needing footwear to be worn in the fields. Many disabled persons, such as the blind, will benefit by the tailoring skills of those who can use a sewing machine. □

Research Reports: Moshi, Tanzania

Provided by **Barbara Leppard DM FRCP**

Management of Scabies and Tinea Capitis by Health Workers in Tarime District, Tanzania

Wilson Maira

Scabies and tinea capitis are among the commonest skin diseases in Tanzania. Both are easily treated and spread can be prevented by treatment of close contacts as well as infected individuals. Both diseases are community rather than individual problems and need to be tackled as such.

Maira interviewed all 75 health care workers in the 3 hospitals, 7 health centres and 13 dispensaries in Tarime District to find

out if they knew how to diagnose and treat scabies and tinea capitis. He did this by use of a questionnaire. What he found was that health care workers at all levels were able to diagnose these 2 common conditions. The problem was with treatment. Only half of the health care workers treated both the patient with scabies and all close contacts with benzyl benzoate (BBE), and one third reported that their health units did not have BBE available to use as treatment. For tinea capitis, more than 90% of health care workers were prescribing Whitfield's ointment

rather than griseofulvin tablets, showing a complete lack of understanding of where the fungus is (see TALC bench aid on tinea capitis in Issue 3 of *Community Dermatology*, page 13). 70% reported that griseofulvin was not available in their health units, and of those who were prescribing it, 90% were using it for less than the recommended 6 weeks.

This study shows that health care workers need in-service training in dermatology and also reference materials such as the TALC bench aids (available from TALC, PO Box 49, St. Albans, Herts, AL1 5TX, UK). The government also need to make sure that the drugs needed for treatment of common skin diseases are available in all health units. □

Seroprevalence of Syphilis and Associated Factors among Antenatal Clinic Attendees in Mbeya Municipality, Tanzania

Jamil Kajuna

Kajuna interviewed 308 pregnant women attending routine antenatal clinics in Mbeya using a simple questionnaire to determine their risk factors for acquiring syphilis.

Questions included:

- Marital status
- If married, whether this was a monogamous or polygamous marriage
- Number of sexual partners prior to the pregnancy

- Information on whether she had ever had treatment for a genital ulcer
- Her occupation and that of her partner
- Her level of education.

At the same time blood was taken to screen for syphilis using the Rapid Plasma Reagin test (RPR).

He found that 16.5% of women were seropositive for syphilis. The factors which increased the risk of being positive were having more than one sexual

partner, being in a polygamous marriage, having a husband or partner who was a driver or business man, having previously been treated for a genital ulcer and having only a primary school education. Syphilis during pregnancy leads to abortion, still birth, prematurity and congenital syphilis. It is good that antenatal clinics are screening pregnant women routinely but a prevalence of 16.5% is alarming. Education about prevention of syphilis is badly needed.

Disability in Leprosy

Two studies on the prevalence of disability in patients with leprosy were carried out by Riziki Mwangolo in the Coast Province of Kenya, and by Paul Chalema in the Lilongwe District in Malawi.

Substantial progress has been made in the treatment of leprosy since the introduction of multiple drug therapy but the number of new cases/year has not altered and the effects of disability still ruin lives and lead to loss of jobs and social isolation.

WHO classification of disability in leprosy

Both studies looked at the prevalence of disability in leprosy. It was found to be 36.8% in Malawi and 45% in Kenya, with

more patients presenting with Grade 2 disability (56%) than Grade 1 (44%). Disability was more likely to occur if:-

- The patient had come late for treatment of leprosy (more than 6 months after the onset of symptoms)
- The patient had attended a traditional healer for treatment
- The patient thought that leprosy was due to witchcraft

- The patient lived more than 10 km from a health facility.

Much more attention needs to be given to the prevention of disability and the care of disabilities. Mobile clinics in villages need to be set up so that patients do not need to travel too far. The health care workers at these clinics need to look actively for new patients, as well as giving education to the patients, their families and the local community.

Grade	Hands and feet	Eyes
0	No anaesthesia No visible deformity or damage	No eye problems due to leprosy No evidence of visual impairment
1	Anaesthesia present No visible deformity or damage	Eye problems due to leprosy Vision 6/60 or better (can count fingers at 6 metres)
2	Visible deformity or damage present	Severe visual impairment Vision <6/60 (unable to count fingers at 6 metres)

BOOK REVIEW: TROPICAL DERMATOLOGY

Eds. Steven Tyring, Omar Lupi, Ulrich Hengge
Elsevier, 2005
ISBN 0-443-06790-2
Pages 515
Price in UK: £60-99

For distribution centres and costs:
Website: www.elsevier.com
Search: authors' names and ISBN

This is a superb book, beautifully presented with a clear layout, tables and, where appropriate, diagrams of life cycles of infective organisms.

The format consists of an introductory part, largely aimed at physicians dealing with foreign travellers, followed by a comprehensive section on the major tropical infections, and finally by a brief summary of non-infectious conditions such as features of malnutrition. Although perhaps not discussed to an extent comparable with their frequency in tropical skin disease clinics, pyodermas, scabies, HIV and sexually transmitted infections each form the topic of a separate chapter. My main surprise was that tungiasis gets the most brief of mentions as a possible problem in returning travellers, without any illustrations or treatment as provided for other, rarer infestations. This is a minor point, in a generally excellent text.

Sadly, this book (and the treatments it suggests) will be unavailable to many individuals practising dermatology in tropical parts of the world, but all teaching centres should try to buy a copy. I am very grateful to the publishers, Elsevier, who provided me with a copy to send to the Training Centre in Moshi, Tanzania, as this means that many of those who spread dermatological knowledge will have access to it during their training.

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HERPES ZOSTER -SHINGLES

Herpes zoster, or shingles (meaning a belt) is a reactivation of a previous infection with the Herpes varicella- zoster virus. The patient will have had chicken pox in the past. The virus then remains in the posterior root ganglion for the rest of the patient's life. If the immunity is depressed for any reason (HIV infection, lymphoma, cytotoxic drugs or old age) the virus is reactivated, travels down one of the sensory nerves to the skin and causes herpes zoster.

CLINICAL FEATURES

Before there is anything to see there is pain in the skin
A few days later the rash appears

- grouped vesicles
 - confined to a single dermatome (or 2 adjacent dermatomes)
 - unilateral
 - stops at midline
 - may be a few outlying vesicles or pustules
- The vesicles crust over and heal in 3-4 weeks



PROBLEMS AT SPECIAL SITES

The eye

Can get keratitis or iritis. Worry only if the nasociliary branch of the trigeminal nerve is involved, i.e. the rash involves the side of the nose as well as the forehead.



Start 1% atropine eye drops twice a day and send the patient to an ophthalmologist or an ophthalmic AMO urgently.

The tongue

When the mandibular branch of the trigeminal nerve is involved (chin and side of face), the anterior two thirds of the tongue on that side will also be involved (vesicles and ulceration) causing pain on eating and drinking.



The chest and abdomen

Before the rash occurs, pain on the left side of the chest can mimic the pain of a myocardial infarction. Likewise, abdominal pain before the appearance of vesicles can mimic an acute abdomen.

Bladder and bowel

Involvement of the sacral nerves can lead to retention of urine or constipation

Motor nerve involvement

Rarely can get a facial nerve palsy

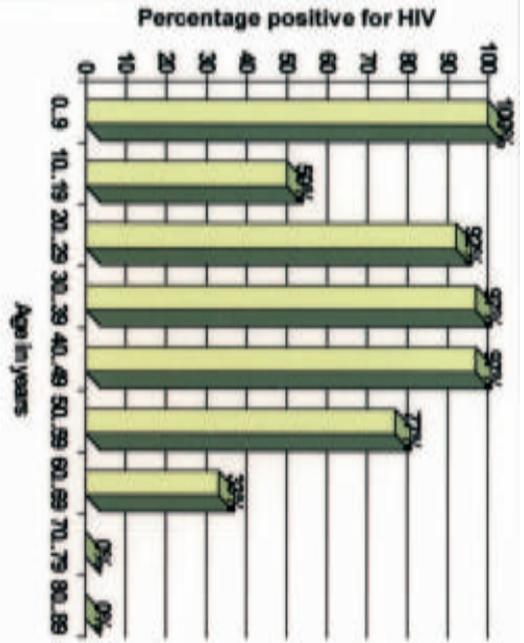
POST HERPETIC NEURALGIA

Pain continuing after the rash has healed is called post herpetic neuralgia. It can go on for months or years and is most likely to occur in the elderly.



TALC

Designed by Liberata Burusu and Barbara Leppard, Regional Dermatology Training Centre, KCMC, Moshi, Tanzania



TREATMENT

Analgesics. The most important treatment is to control the patient's pain with regular analgesics.

- paracetamol 1g every 4 hours
- aspirin 600mg every 4 hours

Topical treatment. While the blisters are intact no topical treatment is necessary. Once the blisters have broken they can be painted with 0.5% Gentian Violet paint. This will help to dry the rash and prevent secondary infection.

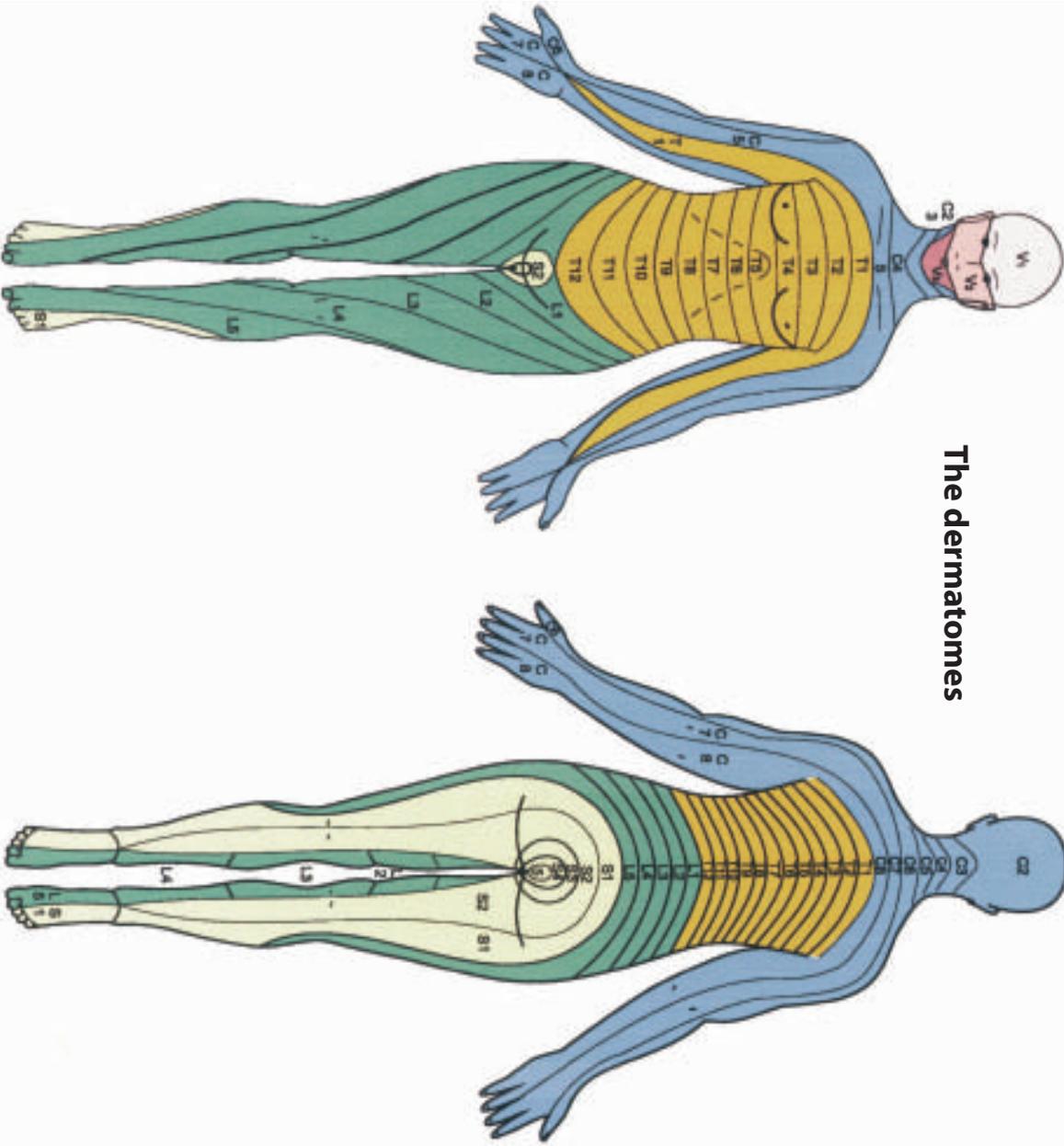
Antiviral agents. Antiviral drugs are very expensive and are only effective if given within the first 48 hours after the appearance of the rash (because they need active viral replication to work).

- Acyclovir 800mg x5/day for 7 days
- Valaciclovir 1g tds for 7 days
- Famciclovir 250mg tds for 7 days

Post herpetic neuralgia. Regular analgesics (aspirin 600mg or paracetamol 1g every 4 hours). If this does not work try carbamazepine 100mg bd, gradually increasing the dose until it works (up to 400mg bd).

Almost all patients with herpes zoster have HIV except the very elderly.

The dermatomes



SCALY SKIN: IS IT FUNGAL?

ANSWERS

Case 1: Answer – Psoriasis



Figure 1

- **Psoriasis:** this is a chronic scaly skin condition
- **Why is it not eczema?**
 - Distribution is wrong (being extensor)
 - The patches are very well circumscribed
 - The scale is thick and silvery
- **Why is it not leprosy?** The sensation is normal over the patches
- **Why is it not TB?** The patches have a thick scale, whereas the lesions are usually shiny and smooth
- **Why is it not ringworm?** It is too symmetrical, and there is no central clearing of the lesion
- **What treatment?**
 - Moisturisers make the patient less scaly, itchy and much more comfortable
 - Specific treatments include: topical steroids, coal tar extracts and topical vitamin D agents, if you can get them
- **How long does it last?** It is a chronic disease. Although attacks may come and go, the tendency is life long
- **Tips:** If the disease has suddenly become very bad, think about underlying HIV.

Case 2: Answer – Atopic Eczema



Figure 3

Figure 2

- **Complaint:** itchy wide-spread rash which keeps the patient awake at night
- **Examination:** symmetrical rash which may be widespread but especially a problem over backs of knees, and elbow flexures. May lead to hypopigmentation (pale patches) after the lesions settle
- **Cause:** genetic sensitivity to many environmental agents and associated with hay fever and asthma
- **Diagnosis:** classical clinical picture
- **Differential diagnosis:**
 - Why is this not psoriasis? Typically earlier age of onset than psoriasis—often in infancy
 - Distribution is different to psoriasis; it is on the creases of the joints, not the extensor side
- **Treatment:** moisturisers and topical steroids
- **Tips:** It tends to recur so maintenance treatment is recommended with selenium sulphide shampoo as a scalp and body wash once per month.

Case 3: Answer- Ringworm



Figure 4

- **Examination:** circular skin lesion with scaly expanding edge. Leaving behind central clearing but some increase in pigmentation. Usually not symmetrical and may be only one or two lesions
- **Cause:** fungal infection, dermatophyte
- **Diagnosis:** clinical picture is typical; culture of scraping of loose scale from edge of lesion should grow the fungus, if you have the facilities
- **Differential Diagnosis:**
 - Why is this not leprosy? Leprosy is not scaly
 - There is no loss of sensation over the lesions and the lesions are not pale (hypopigmented)
- **Treatment:** topical antifungal agent like Whitfields ointment or clotrimazole or ketoconazole. May need oral antifungal if it is very extensive
- **Tips:**
 - Other family members might be affected (e.g., child might have scalp ringworm and be acting as the source of the fungus in the family, if it does not clear easily)
 - Topical steroids as skin lightening creams can predispose to this condition particularly on the face.

National Electronic Library for Health (NeLH) Skin Disorders Specialist Library

This website library is funded by the National Health Service for health professionals in the UK. It aims to organise clinical knowledge and enable health professionals to make decisions based on the best available evidence. It is open for use by health professionals anywhere in the

world. There are links to other useful sites including the Cochrane Skin Group, the British Association of Dermatologists, etc. There are also links to image libraries such as DermIs, which include illustrations and brief descriptions of many common and rare skin disorders. This is a really useful

and user-friendly internet resource, which is regularly updated and improving all the time. It's well worth a visit!

Click on to www.library.nhs.uk/skin

Chris Lovell

An International Journal for Community Skin Health

**Community
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