

CORE TUTORIALS IN DERMATOLOGY FOR PRIMARY CARE

PDP SELF-TEST QUESTIONNAIRE

SKIN INFECTION AND INFESTATION

AERIAL VIEW OF CORAL
REEF IN THE MALDIVES



UPDATED PDP SELF-TEST QUESTIONNAIRE
2022

‘Active edge’ border of lesion raised or increased scaling with relative clearing in centre (characteristic of ringworm)

CORE TUTORIALS IN DERMATOLOGY FOR PRIMARY CARE

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PDP SELF-TEST QUESTIONNAIRE

INTRODUCTION

This 'self-test questionnaire' has been written by Dr Brian Malcolm, based on the updated (2020) Chapter 3 "Skin Infection and Infestation" of the Core Tutorials in Dermatology for Primary Care. This revised Chapter can be ordered from Dermal at the address below. Alternatively, the Chapter is available to download from the Dermal website www.dermal.co.uk within the Healthcare Professionals Core Tutorials in Dermatology section.



RESOURCES AVAILABLE FROM DERMAL

PROFESSIONAL TRIAL PACKS – The Dermal range of antimicrobial emollients has been specially formulated for use on **dry, itchy skin** as leave-on emollients and also as soap substitutes for skin cleansing in such conditions.

Antimicrobial emollients can be an effective option for managing damaged dry skin. The emollient oils help to **rehydrate dry skin** and the antimicrobials help to **reduce the bacterial load on the skin to reduce the risk of secondary infection**. As the **Dermal** range contain **antiseptics** and not antibiotics, the risk of antibiotic resistance developing is minimised. There are five product choices to suit the different needs of patients:

- On dry skin – *Dermol Lotion*
- On very dry skin – *Dermol Cream*
- As a wash – *Dermol Wash*
- Under the shower – *Dermol Shower*
- In the bath water – *Dermol Bath*



To assist with patient compliance, trial size packs are available to healthcare professionals.

Further information on the Dermal range of antimicrobial emollients, including clinical data and antimicrobial activity studies to support the use of Dermal, can be found on the Dermal website www.dermal.co.uk, in the Healthcare Professionals section.

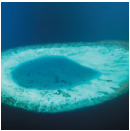
To request professional trial packs or further information, please contact Dermal at the address below.

QUESTIONS

1. What is most commonly the causal organism in the bullous form of impetigo?

2. What is the commonest implicated organism in the causation of cellulitis?

3. In what percentage of the population is tinea unguium clinically diagnosable?



4. Why has limited bacterial resistance emerged to topical mupirocin (Bactroban®) and how can this be maintained?

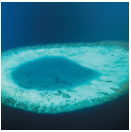
5. What 2 common infections is *Corynebacterium* responsible for?

QUESTIONS

6. How can you reliably differentiate between granuloma anulare and fungal “ringworm”?

7. What proportion of warts self resolve within 2 years?

8. What produces the depigmentary colour changes in infection with pityriasis versicolor?

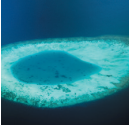


9. Is cryotherapy more effective in treating warts than topical applications?

10. What is the fundamental difference between the pharmacological actions of azoles e.g. itraconazole and allylamines e.g. terbinafine?

11. What did I find useful about the learning module on 'Skin Infection and Infestation'?

12. Having reflected on this module, how might my practice change in managing Skin Infection and Infestation?



ANSWERS (PLEASE TURN UPSIDE DOWN)

The incubation period is 1-3 weeks. The diagnosis can be confused with discoid eczema and can often be very difficult to distinguish initially, although discoid eczema is often intensely itchy and settles into a symmetrical distribution. Less forgivable is confusion with the other commonly occurring annular lesion, granuloma annulare, which is a dermal inflammatory process with no epidermal involvement i.e. an absence of scale.”

QUESTION 7. Answer: Two thirds

Ref page 9 “Two thirds will self resolve within 2 years and plantar warts demonstrate 30 – 50% regression within 6 months. Persuasive arguments to treat include painful, symptomatic warts, usually verrucae on pressure points of the foot, and significant cosmetic morbidity e.g. prominent hand warts in young adults or filiform facial warts in children where ridicule at school can be a factor.”

QUESTION 8. Answer: Azelaic acid produced by the *Pityrosporum* yeast.

Ref page 8 “Pityriasis Versicolor – this common fungal infection literally translated means ‘scaly and of various colours’. This typically affects young adults especially if there is a history of foreign travel in hot and humid climates. The normal commensal organism, *P. orbicularis* undergoes a change to a more aggressive variation, *Malassezia furfur*. This yeast produces azelaic acid which temporarily damages the melanocyte resulting in a fine, scaly, ‘moth-eaten’ pigmentary disturbance, characteristically affecting the trunk and limbs.”

QUESTION 9. Answer: No – the efficacy is largely similar.

Ref page 10 – “A previously popular treatment was cryotherapy but this is increasingly less available in primary and community care settings. There are a number of misconceptions regarding this modality; one is that it is a more potent treatment than topicals, but parallel treatment studies show no statistically significant outcome measures between these two.”

QUESTION 10. Answer: Azoles are fungistatic but have extended activity against yeasts as well as dermatophytes; allylamines are fungicidal but are only active against dermatophytes. **Ref page 6** “Triconazole is available in liquid preparation; it again is fungistatic rather than its main competitor, terbinafine, which has a more effective fungicidal action.” **Ref page 7** “The management of these infections has been revolutionised by the advent of the synthetic antifungal agents, available both topically and systemically, which augmented the limited pre-existing options of topical imidazole creams and systemic griseofulvin.

The classification of antifungal drugs available is as follows

- Azole group – including imidazoles e.g. ketoconazole and itraconazole
- Allylamines – e.g. terbinafine

The triazoles are fungistatic but are active against yeast infections as well.

QUESTION 1. Answer: *Staphylococcus*

Ref page 1 “The implicated organisms are *Staphylococcus* or, less commonly,

Group A haemolytic *Streptococcus* (10% of cases). The bullous variation is invariably staphylococcal mediated. Infestation/eczema are commonly secondarily impetiginised.”

QUESTION 2. Answer: *Streptococcus pyogenes*

Ref page 2 “This is another common presentation manifesting as a rapidly progressive infection through the deeper subcutaneous planes, usually due to the ingress of bacteria, most commonly *Strep. pyogenes* but sometimes *Staphylococcus aureus*. There is often some pre-existing minor breach in the epidermis.”

QUESTION 3. Answer: 2%

Ref page 5 “The appearances of chronic tinea unguinum are often put down to ‘ageing’... tinea unguinum, which is evident in over 2% of the population... Tinea unguinum rarely causes complications however occasional drug reactions, particularly liver toxicity, to oral antifungals can be serious. However, individual careful case selection for treatment on an individual basis is required.”

QUESTION 4. Answer: Mupirocin (Bactroban) has a unique bactericidal action via RNA

inhibition. To avoid resistance emerging, prolonged use should be avoided.

Ref page 1 “There is established community resistance of *Staphylococcus* to erythromycin and almost universally to penicillin. More worryingly, there are increasing concerns recently about developing resistance to fusidic acid (Fucidin) which delivers its effect by inhibiting bacterial protein synthesis. The other topical antibiotic in common usage is mupirocin (Bactroban) with its unique bactericidal action via RNA inhibition. It is active against both *Staphylococcus*, including MRSA, and *Streptococcus*. Resistance presently remains low but long term usage can induce irreversible *Staph. aureus* resistance and is therefore to be discouraged.”

QUESTION 5. Answer: Erythrasma and pitted keratolysis

Ref pages 2 and 3 “There are two common but poorly recognised infections caused by the humble *Corynebacterium minutissimum*.

The first is erythrasma, often masquerading as ‘fungal infection’ with a predilection for the toe webs, axillae and genital/ocrotal region. Clinically, there is often a subtle confluent, slow spreading, well demarcated scaly erythema which fluoresces ‘coral pink’ under Wood’s light (filtered long wave UVL), if available, as a consequence of porphyrin production as a metabolic by-product.

The second is pitted keratolysis which is a consequence of *Corynebacterium* overgrowth in the soles of feet of hyperhidrotic individuals, giving a very characteristic punctate (pitted) appearance in association with macerated and malodorous skin on the plantar aspects. As well as treating the *Corynebacterium*, the underlying hyperhidrosis needs addressing or recurrence is likely.”

QUESTION 6. Answer: The former is primarily dermal with an infiltrate but no scale.

The latter involves the epidermis and there will be scale present.

Ref page 6 “TINEA CORPORIS – this manifests as the classical ‘ringworm’, a slow, radially enlarging dermatosis, single or multiple, and often relatively asymptomatic with an inflammatory scaly edge and central clearing. Three common genera of dermatophyte are implicated: *Microsporum*, *Epidermophyton* and *Trichophyton*.”