

## Answers to Dermato-venereological Quiz on page 38

1. Wood's lamp examination is a helpful bedside investigation for detection of dermatophyte skin infection caused by *Microsporum* species. One would expect to see blue-green fluorescence on clinical lesions caused by *Microsporum* (*M.*) *canis*, *M. audouinii*, *M. ferrugineum* and *M. distortum*. Lesions caused by *Trichophyton* (*T.*) *schoenleinii* will give off dull blue fluorescence. All other dermatophyte species will have negative fluorescence.

Skin scrapping for fungal microscopy and culture is also a helpful investigation.

This young girl has recently adopted a new pet cat which was likely the culprit of cutaneous infection. As reported by the patients, the cat often sleeps on her bed or lays on sofa with her.

2. The differential diagnoses include tinea corporis, psoriasis, discoid eczema and pityriasis rosea.
3. The most likely diagnosis is tinea corporis.
4. Tinea corporis can be acquired through direct contact with infected individuals, or animals or infected fomites. Clinical disease would occur via spreading from other bodily regions, notably the scalp or the feet. *T. rubrum* is the most common cause of tinea corporis. Other responsible aetiological agents include *T. tonsurans*, *M. canis*, and *T. mentagrophytes/interdigitale* complex etc. *M. canis* is zoophilic, cats and dogs are the natural reservoir and hence source of human infection. Human usually acquires the pathogens by close physical contact with an infected cat or dog. *M. canis* can cause tinea corporis (glabrous skin) and tinea capitis (hair-bearing regions of scalp) in humans.

There were observations that cats are a frequent source of human infection especially in children. Cats infected with *M. canis* may also present with atypical clinical lesions or no clinical lesion at all. Therefore, it is prudent to perform physical examination and laboratory testing in pet cat especially when *M. canis* is isolated from the skin lesions of their human host.

The environment can serve as a natural reservoir of fungi. Arthroconidia may persist for months or years, particularly when embedded in hair or skin scales, on floors, and objects associated with grooming, (e.g. infected animal's combs or brushes etc). Sofas, beds, blankets and furniture can be potentially contaminated as well. Infection acquired from contact with a contaminated environment alone without the presence of infected animals nearby is considered exceptional.

5. The management includes topical and systemic antifungal treatment. Topical treatment includes topical azoles such as clotrimazole cream, or ketoconazole shampoo as daily body wash.

Decontamination is important as it helps minimise the risk of re-infection and possible re-treatment. Before the application of cleaning products, it is important to remove all debris by vacuuming or sweeping, since disinfectants cannot work in the presence of organic material. The disinfectants should be non-toxic, and with a low risk of irritation to the users and to animals. The disinfectants e.g. house bleach 1:100 should be compatible with the surfaces to which they are applied.

In patients with widespread, treatment-recalcitrant or recurrent disease, systemic treatment with terbinafine, itraconazole or griseofulvin can be considered if without contraindication. Treatment of potentially infected animals should be commenced before mycology result is available. This is critical in prevention against re-infection. This practice should also be extended to the clinical management of the immunocompromised patients.