

Summary of Guidelines for the Management of Onychomycosis

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Onychomycosis is an infection of the nail apparatus by fungi which include dermatophytes, non-dermatophyte moulds, and yeasts (mainly *Candida* species). The toenails are affected in 80% of all cases of onychomycosis. Dermatophyte infection, mostly due to *Trichophyton rubrum*, is the cause in over 90% of cases.

Treatment should not be commenced before mycological confirmation of infection. Terbinafine is superior to itraconazole both in vitro and in vivo and should be considered first line therapy in onychomycosis, with itraconazole as the next best alternative.

Main recommendations (with strength of recommendations and quality of evidence grading)

Topical treatment can be recommended only for treating Superficial White Onychomycosis (SWO), very early Distal and Lateral Subungual Onychomycosis (DLSO) or where systemic therapy is contraindicated.

- Amorolfine (Loceryl®) nail lacquer is effective in around 50% of fingernail and toenail dermatophyte infections (Strength of recommendation B; Quality of evidence II-ii).
- The efficacy of Tioconazole (Trosyl®) nail solution is reported as varying from 20% to 70% (C, II-iii).

Systemic therapy is almost always more successful than topical treatment in dermatophyte infections

- Terbinafine (Lamisil®) is fungicidal with high cure rates. Good compliance is likely but it is not licensed for use in children, and can cause idiosyncratic liver and skin reactions. Licensed dose is 250mg daily for six weeks in fingernail and 12 weeks for toenail infection. (A, I).
- Itraconazole (Sporanox®) is active against a range of fungi including yeasts, dermatophytes and some non-dermatophyte moulds. It is active against *Candida albicans* and pulsed treatment regimes can be used. Liver function must be monitored in treatment regimes lasting longer than one month. (A, I)
- Griseofulvin (Fulcin®:Grisovin®) is weakly fungistatic and is the only antifungal agent licensed for use in children with onychomycosis. The recommended dose is 10mg/kg daily for children over one month of age. In adults the recommended dose is 500mg daily for fingernail infection for 6 – 9 months and 12 – 18 months for toenail infection. However, one gram is more commonly prescribed.

Treatment of Yeast Infections and Non-Dermatophyte Moulds

- The majority of yeasts infections can be treated topically, particularly those associated with paronychia. Antiseptics can be applied to the proximal part of the nail and allowed to penetrate beneath the cuticle thus sterilising the subcuticular space.
- An imidazole lotion alternating with an antibacterial lotion is usually effective.
- Itraconazole (Sporanox®) is the most effective agent for treating *Candida* onychomycosis where the nail plate is invaded by the organism.
- *Scopulariopsis brevicaulis* may be a secondary pathogen in the presence of a dermatophyte infection masked by the scopulariopsis. Terbinafine may be the best option in this situation.

Audit Points: positive mycology prior to treatment; use of topical agents for treating SWO or early DLSO; difference between clinical and mycological response to systemic therapy; side effects of systemic therapy.

Reference:

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