DERBYSHIRE JOINT AREA PRESCRIBING COMMITTEE (JAPC)

Derbyshire Shared Care Pathology Guidelines

Onychomycosis in adults - guidelines for empiric treatment and submission of samples to the laboratory.

Onychomycosis refers to the chronic fungal infection of the toenails or fingernails. Causative agents include dermatophytes, yeasts and non-dermatophyte moulds. Dermatophyte infections are by far the most common, with 91% of recent positive nail samples sent to Derbyshire Pathology isolating *Tricophyton* species (dermatophyte).

1. Clinical features

Onchomycosis can present with a variety of nail abnormalities, such as discolouration, splitting, thickening of the nail and nail plate destruction.

2. Treatment

Discuss with the patient their expectations for successful management of the condition before starting treatment. Onychomycosis is difficult to eradicate and often recurs.

Advise on self-care management strategies and advice as per Scenario: Management | Management | Fungal nail infection | CKS | NICE.

Advise that antifungal treatment is not needed if the person is not troubled by the appearance of the nail(s), and/or the infection is asymptomatic.

Advise on the option of antifungal treatment if walking is uncomfortable, there is significant psychological distress due to the cosmetic appearance of the nail(s) or there are comorbid conditions which increase the risk of complications.

In the first instance patients should consider purchasing amorolfine 5% nail lacquer over-the-counter.

If self-care measures alone and/or OTC topical treatment is not successful or appropriate commence empiric first line treatment. **DO NOT** routinely send nail samples to the laboratory.

Terbinafine is first line oral treatment, with a systematic review demonstrating moderate superiority over azoles [1].

Drug	Dose	Duration
Terbinafine	250mg once daily	Fingers: 6 weeks Toes: 12 weeks
Itraconazole	200mg twice daily for 7 days a month (pulsed therapy)	Fingers: 2 courses Toes: 3 courses

3. Sampling

Nail specimens are only indicated and will only be accepted by the laboratory as outlined below. Please ensure that all relevant clinical details are included on the request form if sending nail samples.

Samples will be processed from the following patients
All nail samples from secondary care (including, but not limited to, immunology, dermatology, infectious diseases)
All nail samples from children
Nail specimens from other patient groups will be processed only if: • Suspected Empirical treatment failure • Infection arising after foreign travel • Unusual animal or environmental exposure • Immunosuppressed (including HIV and diabetes)

4. Adverse effects and contraindications

Terbinafine is associated with very common or common side effects such as appetite decreased, arthralgia, diarrhoea, gastrointestinal discomfort, gastrointestinal disorder, headache, myalgia and nausea.

Terbinafine should not be prescribed in people with chronic or active hepatic disease and severe renal impairment.

Itraconazole is associated with very common or common side effects such as alopecia; constipation; diarrhoea; dyspnoea; gastrointestinal discomfort; headache; heart failure; hepatic disorders; hyperbilirubinaemia; nausea; oedema; pulmonary oedema; skin reactions; vision disorders; vomiting.

Itraconazole in contraindicated in acute porphyria.

Terbinafine side effects include headache, dermatitis, gastrointestinal distress and liver enzyme abnormalities. It is associated with mildly elevated serum aminotransferase levels in less then 1% of patients and in these patients only 0.31% of patients require a stop in treatment [2, 3].

5. Monitoring

Monitoring LFTs is recommended at baseline and 6 weeks if continuing treatment for both terbinafine and itraconazole. Discontinue if abnormalities in liver function tests.

6. Rationale for empiric treatment

Derbyshire pathology has reviewed recent nail culture results and identified that 91% of positive samples were *Trichophyton* species where terbinafine or itraconazole would be recommended for treatment, with a further 8% yeasts or moulds which would typically be sensitive to terbinafine. Therefore given the first line options of terbinafine or itraconazole are likely to treat >95% of onychomycosis cases.

7. References

1. Kreijkamp-Kaspers S, Hawke K, Guo L, Kerin G, Bell-Syer SE, Magin P, Bell-Syer SV, van Driel ML Oral antifungal medication for toenail onychomycosis. Cochrane Database Syst Rev. 2017;7(7):CD010031. Epub 2017 Jul 14.

2. Aaron Brown, Mark Potesta and Ajmal Hameed (2024) Drug induced liver injury secondary to terbinafine use Cureus cureus-0016-00000054453.pdf

3.Bethesda, MD: National Institute of Diabetes and Digestive and Kidney Diseases; 2012. LiverTox: Clinical and Research Information on Drug-Induced Liver Injury. Terbinafine [Internet] [PubMed] [Google Scholar]