

Fungus (Tinea / Onychomycosis) Referral Guideline

Indications for Specialty Care Referral

- The diagnosis is uncertain. Please document negative PAS or KOH preparations.
- The following may be referred to Podiatry: Patients who request nail removal (temporary) as augmentation to the primary care regimen and those requesting permanent nail ablation via chemical cautery.

Criteria for Return to Primary Care

After diagnosis confirmation or completion of a surgical procedure or systemic therapy, patients may be managed at the primary care level.

Diagnosis/Definition

- Fungal infection of skin, hair or nails by dermatophyte is called tinea. They survive on dead keratin and are not found on mucous membranes.
- Tinea versicolor is caused by a lipophilic yeast *Pityrosporum orbiculare* (*Malassezia furfur*)

Initial Diagnosis and Management

- History and physical examination.
- Differential diagnosis for tinea includes dermatitis, psoriasis, hives, and granuloma annulare.
- Differential diagnosis includes for onychomycosis includes psoriasis, lichen planus, nail trauma, and median nail dystrophy.
- Differential diagnosis of TV includes post-inflammatory hypopigmentation, pityriasis rosea, nummular eczema, and guttate psoriasis.
- Tinea occurs as scaling plaques with central clearing but may have a variety of presentations. As the saying goes...”if it scales, scrape it.”
- Infection of nails is suggested by thickened, yellow or brown, and friable nail plates.
- TV occurs as small, circular, scaling papules primarily on central trunk and back. Lesions are hypopigmented on tanned skin and pink on untanned skin. The scale is accentuated when lesion is scraped.
- Technique: potassium hydroxide (KOH) preparation: scrape edge of the lesion with 15 blade and put scrapings on slide. Cover slide with plastic slide cover. Slide may be heated gently to increase epidermolysis. Diagnosis is confirmatory for TV with presence of short, rod shaped fragments, intermixed with round spores “spaghetti –and-meatballs”. Translucent, branching, rod-shaped hyphae with uniform width with lines of septation are diagnostic of tinea.
- Technique: PAS staining may be done to confirm onychomycosis. Submit nail clippings and currettings in formalin. Enter tissue exam and for specimen type use nail clippings for onychomycosis. The pathologist will do appropriate PAS staining with results typically available in 48-72 hours.

- Entry into the patient's Master Problem List by the provider confirming the diagnosis.

Ongoing Management and Objectives

- (See [Tinea Handout](#)) Tinea: treatment with topical agents is preferred. Terbinafine 1% cr (formulary) may be used. Adjuvant therapy with tolnaftate powder (formulary) may also be given.
- (See [Tinea Handout](#)) Onychomycosis: Treatment should include continued documented education. This counseling should state that onychomycosis is often resistant to treatment and recurrence following successful treatment is common. Terbinafine orally is indicated for the treatment of onychomycosis: nails 6 weeks, toenails 12 weeks. Prior authorization is required and sheets can be found on the pharmacy website or at the pharmacy. Patients need to have a confirmed diagnosis and normal baseline LFTs prior to initiation of treatment.
- TV: Document chronic nature of course and that the dyspigmentation often persists after several weeks after the yeast is eliminated. Treatments with topicals are preferred for limited disease. Selenium sulfide 2.5% or ketoconazole 2% shampoo, applied to damp skin and left on for 5 minutes, then rinsed has a cure rate of about 70%. Topical ketoconazole cr 2% applied qd-bid for 2-4 weeks is effective for localized areas. Oral treatments for extensive disease and may be considered in a variety of treatment regimens such as Ketoconazole 400 mg in a single dose or 200 mg for 5 days taken at breakfast with a fruit juice. Note: terbinafine (lamisil) is not affective in this condition.