

Referral Support Service

Dermatology

D13

Onychodystrophy

Definition

- Onychodystrophy refers to any abnormality of nail growth, thickness or appearance.
- There are several possible underlying causes. Some causes listed below:
 - [Fungal Infections](#) (Onychomycosis): Can affect any part of the nail. 85-90% caused by dermatophyte fungi, 5-10% by Candida species and 2-5% cases by non-dermatophyte moulds.
 - [Psoriatic Nails](#): Most patients have chronic plaque Psoriasis, pitting is common.
 - [Chronic Eczema](#): Irregular, ridged (corrugated surface), and thickened nails.
 - [Lichen Planus](#): Can involve skin, mucous membranes, and/or nails. Nails may look grooved, fissured or ridged.
 - [Alopecia Areata](#): Pitting and ridging of nails in up to 50% of cases.
 - [Yellow Nail Syndrome](#): Green-yellow discoloration of the nail. Can be associated with bronchiectasis and chronic sinusitis.
 - [Onychogryphosis](#): Thickened, hard, curved nails, commonly in the elderly.
 - [Bacterial Infection](#) (*Pseudomonas aeruginosa*, [Paronychia](#)), [Herpes simplex](#), [viral warts](#)
 - Trauma from footwear.

Exclude Red Flag Symptoms

- Be aware of [subungual melanoma](#) presenting as discolouration of nail.
- [Periungual squamous cell carcinoma](#) or Bowen's disease: likely single nail affected with abnormal ulceration/warty changes/bleeding.

Diagnosis

- General skin and nail examination to look for causes e.g. psoriasis, fungal skin infection.
- For **suspected fungal nail infection**:
 - Arrange nail **clippings and /or scrapings** for **microscopy and culture** (must wipe off all topical treatment with alcohol wipes prior to sampling).
 - **Be aware of false negative results (30%)**. Repeat sample if high clinical suspicion.

Management

- If culture for fungus is negative advise nail care to keep nails short and thin.
- Only offer anti-fungal treatment if fungal infection confirmed by mycology.
- **Fungal nail infection**
 - If asymptomatic can opt for no treatment.
 - Treat if symptomatic / co-morbid conditions / associated with fungal skin infections.
 - **Topical** most effective for dermatophytes and candida species.
 - Over the counter **topical treatment** with **amorolfine 5% nail lacquer**, **once or twice weekly to the affected nails only**.
 - **Duration of treatment:** Up to 6 months for fingernails and 9-12 months for toenails. This is not routinely commissioned - available from pharmacy / online.
 - **Oral treatment** recommended if confirmed fungal infection and topical and self-care measures fail or not appropriate. For dermatophytes,
 - **First line: Terbinafine 250mg once a day** for 6 weeks - 3 months for fingernails and 3-6 months for toenails.
 - **Alternate therapy:** Pulsed treatment with **itraconazole 200mg bd** for 1 week repeated every 21 days .Two pulsed courses for fingernails, three for toenails. Monitor LFTs as per [BNF](#).
 - **Candida and non-dermatophyte infection:** Oral **itraconazole** as first line and **terbinafine** as alternate therapy at the above doses but is **off label use**.
- Do not use topical and oral treatments at the same time.
- Rarely may need nail removal if refractory or recurrent infections.
- **Podiatry referral** if thickened nails, trauma due footwear, difficulty obtaining sample or need for nail avulsion in severe disease.
- **Refer to Dermatology if:**
 - There is diagnostic uncertainty.
 - Treatment failure in Primary care.
 - Immunocompromised or co-existing conditions like Lichen planus, psoriasis.
 - Fungal nail infections in children: Rare and topical treatments not licensed for children under 12 years of age.

Referral Information

Information to include in referral letter:

- How long nail problem has been present
- Which nails are affected
- Results from nail clippings and filings sent for mycology
- Any treatments that have been tried and for how long
- Personal or family history of any skin disease
- A photograph is desirable
- Relevant past medical/surgical history

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- Current regular medication
- BMI/smoking status

Investigations prior to referral:

- Nail clippings sent **for mycology**. Need to check adequate sample sent and may be worth repeating if first sample comes back negative.

Patient information leaflets/ PDAs

There is a patient information leaflet about fungal nail infection on patient.co.uk.

<http://www.patient.co.uk/health/fungal-nail-infections>

References

- Very useful webpage with good pictures of lots of nail problems.
<http://www.dermnetnz.org/hair-nails-sweat/nails.html>
- [NICE CKS Fungal Nail Infection](#) (March 2018)
- [Public Health England \(2017\) Fungal skin and nail infections: Diagnosis and laboratory investigation.](#) (PHE 2017)