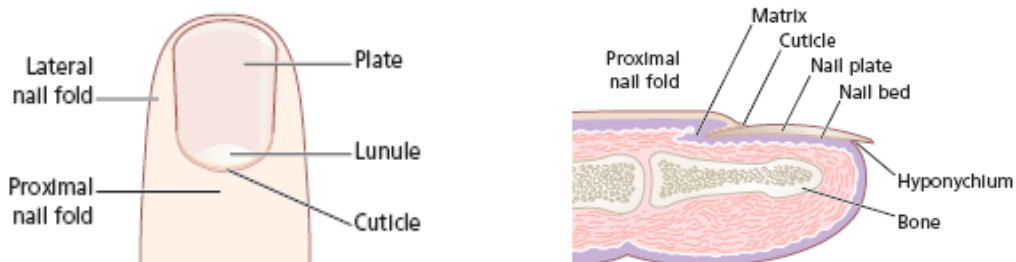


Nail Problems

Components of the Nail



Congenital Disorders

Racket nails, characterized by a broad short thumb nail, is the commonest congenital nail defect, dominantly inherited and seen in 1% of the population. The basic abnormality is shortness of the underlying terminal phalanx.

In the **yellow nail syndrome**, the nail changes begin in adult life, against a background of hypoplasia of the lymphatic system. Peripheral edema is usually present and pleural effusions may occur. The nails grow very slowly and become thickened and greenish-yellow; their surface is smooth but they are over curved from side to side.

Acquired Nail Changes

Beau's Lines

Transverse lines or grooves in nail. Causes include any severe systemic illness or medications (chemotherapy), which affects

growth of the nail matrix. Clinically: The grooves or lines move distally; the distance from the nail fold lets one assess the time of trauma.

Onycholysis

Separation of nail from nail bed. Causes include psoriasis, dermatitis, fungal infections; medications (*photo-onycholysis* from tetracyclines or psoralens), thyroid disease; rarely inherited. *Idiopathic onycholysis* is most common among women; painless separation of nail without apparent cause. Typically, the distal third separates and underlying nail bed becomes darker and thickened. Therapy: Cut nail very short to reduce leverage encouraging separation, apply antifungal solution. Usually self-limited process.

Ingrown Nail

Penetration of nail plate into tissue of lateral nail fold. Almost always involves great toes. Causes include congenital malformation of nail (pincer nail), improper trimming, and tightly fitting shoes. Clinically: Distorted nail with swelling, pain, and granulation tissue along the lateral nail fold. Therapy: *Mild cases:* Eliminate pressure, trim nail; topical antiseptics as foot soaks or on small piece of cotton wool pushed under affected nail. *Severe cases:* lateral nail fold is excised and lateral aspect of nail matrix destroyed.

Trauma

Trauma, especially from sport, commonly causes nail abnormalities.

Subungual haematomas usually occur when a fingernail has been trapped or a toenail stood on or stubbed, but the possibility of a subungual malignant melanoma must always be considered.

Splinter haemorrhages are induced by trauma, although they also occur with infective endocarditis.

Brittle nails where nails break easily, usually at distal margins a common complaint, usually due to repeated exposure to detergents and water, although iron deficiency, hypothyroidism and digital ischemia are other causes

Infections

Acute paronychia

Acute infection of nail fold, most often bacterial (staphylococcal) infection, facilitated by damage to cuticle; less often herpes simplex; rarely iatrogenic (patients receiving systemic retinoids). Presented as painful swelling of proximal or lateral nail fold region. If bacterial, incision and drainage; systemic antibiotics; if viral, no manipulation, systemic antivirals.

Chronic paronychia

Chronic paronychia of the fingernails due to *C. albicans* is often seen in wet workers. The cuticle is lost, the proximal nail fold becomes boggy and swollen, and light pressure may extrude pus. The nail plate becomes irregular and discolored. Gram-negative bacteria may be co-pathogens and turn the nail a blue-green color. Management is directed towards keeping the hands dry, applying an imidazole lotion or cream twice daily to the nail fold, or oral itraconazole for 14 days.

Onychomycosis (tinea unguium)

Fungal infection of the nails. Toenails, especially the big toenails, are involved more than fingernails. The process usually begins at the distal nail edge and extends proximally to involve the whole nail. The nail separates from the nail bed (onycholysis), the nail plate becomes thickened crumbly and yellow and subungual hyperkeratosis occurs. Several but almost never all the toenails may be involved. Treatment is with systemic antifungal.

Dermatoses

The nails are commonly involved in skin disease, and are routinely assessed in a dermatological examination. Treatment is aimed at the associated dermatosis.

1-**Eczema**: Coarse pitting, transverse ridging, dystrophy, shiny nails due to rubbing.

2-**Lichen planus**: Thinned nail plate, longitudinal grooves, adhesion between distal nail fold and nail bed (pterygium), complete nail loss

3-**Psoriasis**: Pitting, nail thickening, onycholysis (separation of nail from nail bed), brown discoloration, subungual hyperkeratosis.

4-**Alopecia areata**: Fine pitting, roughness of nail surface.

Tumors

Tumors of the nail and nail bed are rare, but it is not uncommon to see benign tumors around the nail fold. Examples of both include:

Peri-ungual viral warts are common and stubborn. Cryotherapy must be used carefully to avoid damage to the nail matrix. It is painful but effective.

Periungual fibromas: These are seen in patients with tuberous sclerosis and appear at or after puberty.

Glomus tumours: can occur beneath the nail plate. The small red or bluish lesions are exquisitely painful if touched and when the temperature changes. Treatment is surgical.

Myxoid (mucous) cysts: The cysts appear adjacent to the proximal nail fold usually on the fingers. They are fluctuant, semi-translucent papules that contain a clear gel and may arise from folds of synovium. Treatment is by cryotherapy, injection with triamcinolone acetonide (a steroid) or excision.

Malignant melanoma: A subungual malignant melanoma should be excluded by biopsy if a pigmented longitudinal streak suddenly appears in a nail, particularly if the pigment spreads to the surrounding skin. Subungual haematomas may cause confusion but 'grow out' with the nail. The risk of misdiagnosis is highest with an amelanotic melanoma, which may mimic chronic paronychia or a pyogenic granuloma. Any atypical or ulcerating lesion around the nail fold requires a biopsy to exclude a malignant melanoma.