



Treatment of nail disorders

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There are several reasons that make the nail unit difficult to treat. It is necessary to wait for several months before seeing the results of treatments in nail disorders, as the nail plate grows very slowly (average nail growth is 3 mm/month in fingernails and 1–1.5 mm/month in toenails). It is very important to give the patients this information, as they may otherwise discontinue the treatment feeling it to be ineffective. Delivery of topical drugs through the nail is difficult, as vehicles utilized for enhancing penetration of drugs through the skin are not effective in the nail. Most topical drugs are therefore ineffective in the treatment of inflammatory nail disorders, since the nails are largely exposed to environmental hazards and nail disorders are commonly precipitated or worsened by physical traumas. Thus, clinicians often do not prescribe systemic treatment when the disease is limited only to the nails.

Brittle nails

Nail brittleness is a common complaint characterized by weak nails that split, flake and crumble. It may be a consequence of factors that alter the nail plate production and/or factors that damage the already keratinized nail plate [1–3]. Since environmental and occupational factors that produce a progressive dehydration of the nail plate play a main role in the development of idiopathic nail brittleness [4], the management of brittle nails includes protective measures that prevent nail plate dehydration. Patients should be instructed to pursue the following rules:

- Avoid repeated immersion of the hands in soap and water
- Avoid repeated use of nail polish removers that decrease nail content in water
- Keep nails short and squared, and leave cuticles uncut
- Protect hands with rubber gloves worn over light cotton gloves during housekeeping

Cosmetic treatment

Nail hardeners, nail strengtheners and fortifying nail builders are commercially available to enhance the appearance of nails but there are no data proving their efficacy. Nail varnishes may be useful to protect the nail plate from environmental hazards but they always need to be removed with nail polish removers. For this reason, nail polishes should be applied once a week. In recalcitrant fragility, nail wrapping limited to the distal portion of the nail plate as well as preformed artificial nails and sculptured nails may afford protection and camouflage [5].

Topical treatment

Nail moisturizers are useful. They may contain occlusives such as petrolatum or lanoline and humectants, such as glycerin and propyleneglycol. Proteins, fluorides and silicium can also be useful. Urea and α -hydroxy acids increase the water binding capacity of the nail plate [5].

Systemic treatment

- Biotin 2.5–5 mg/daily for 6 months [6]
- Iron supplementation is useful only when ferritin levels are below 10 ng/ml
- Colloidal silicic acid has been reported effective at the dosage of 10 ml/day [7]

Onycholysis

Onycholysis describes the detachment of the nail plate from the nail bed. It may be idiopathic, traumatic or may be a symptom of numerous diseases that affect the nail bed. The onycholytic area appears whitish due to the presence of air under the detached nail plate. It may occasionally present a green or brown discoloration due to colonization of the onycholytic space by chromogenic bacteria (*Pseudomonas aeruginosa*), molds or yeasts. A waterborne environment facilitates the development of this condition.

Topical treatment

- The detached nail plate should be clipped away and this should be repeated at 2-week intervals until the nail plate grows attached
- The exposed nail bed should be carefully dried after each hand washing

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