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Commentary

# The Development of New Therapies on Fungal Nail Infections

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## DESCRIPTION

Onychosis, often known as nail disease, is an illness or malformation of the nail. Although the nail is a skin appendage and a structure created by the skin, nail illnesses are classified differently since they have their own indications and symptoms that may be related to other medical conditions. Some nail diseases that exhibit symptoms of inflammation or infection may call for medical attention. Onychia is an infection of the nail folds (the tissue that surrounds the nail plate), which results in pus production and nail shedding. Onychia is the result of microscopic microorganisms entering the body through tiny incisions. The condition known as onychocryptosis, also referred to as "ingrown nails" (unguis incarnatus), can affect the fingers or toes. The nail cuts into one or both sides of the nail bed in this disease, causing swelling and perhaps infection. Given how uncommon this ailment is in the fingers, pressure from the ground or a shoe against the toe may be a major contributing factor. Walking movements or other bodily disruptions may be a factor in the issue. When there is no infection present, mild onychocryptosis can be treated by cutting and rounding the nail. The nail's in growing section is surgically excised down to its skeletal origin in more severe cases, which typically also include infection. The matrix, or "root," is then thermally or chemically cauterised to stop the nail from growing back. The name of this procedure is matrixectomy. The matrix should be cauterised for the optimum outcomes. The Vandenbos procedure is a very efficient procedure that concentrates on removing extra nail fold tissue without harming good nails or nail matrix. Onychocryptosis can be removed with the Vandenbos procedure with little to no change to the natural nail. Excision of the matrix, sometimes known as a "cold steel technique," is a different, significantly less successful treatment. Bleomycin, hydroxyurea, or 5-fluorouracil are examples of cancer chemotherapy drugs that can cause onychodystrophy, a distortion of the nails. Dyschromia or nail discolouration may be present.

The condition known as "ram's horn nail," or onychogryposis, causes the nail to thicken and become more curved. Usually, a matrix injury is the cause of it. Long-term neglect can also cause it, and it may be partially inherited. Although it most frequently affects the great toe, it can also affect other toes and even the fingernails. An damaged nail is brownish in colour, has several grooves and ridges, and grows faster on one side than the other. The issue is made worse by the thick, curved nail, which is difficult to cut and frequently goes untrimmed. Each and every nail on the right foot has onychomycosis. Onycholysis is the loosening of the visible nail from the nail bed, typically starting at the base of the nail. It is frequently linked to an underlying condition, trauma, an infection, nail fungus, an allergy to nail care products, or drug side effects. The falling off and separating of a nail from the nail bed is known as onychomadesis. Localized infection, modest matrix bed damage, or severe systemic diseases are common causes. It can occasionally be a side effect of cancer treatments like chemotherapy or x-rays. When the disease's underlying cause is treated, a new nail plate will develop. The same fungi that cause ringworm of the skin (*Trichophyton rubrum* or *T. mentagrophytes*, occasionally other trichophyton species or *Epidermophyton floccosum*) also cause onychomycosis, often known as tinea unguium, a contagious nail infection. It can cause the nails to become discoloured, thicken, become chalky, or crumble, and is frequently treated with potent oral drugs that, on occasion, may have serious side effects like liver failure. Mild onychomycosis can occasionally be treated with a combination of periodic filing of the nail surface and topical antifungal medicine, which is sometimes given as special medical nail lacquer. Systemic therapy (pills) is preferred for advanced onychomycosis, especially if more than one nail is infected. Although there is debate over their efficacy, home cures are frequently employed.

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