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ACUTE PARONYCHIA

Recognizing and Treating the Most Common Hand Infection

Hand Surgery Resource provides concise, evidence-based education on hand trauma diagnosis and management. This issue reviews acute paronychia and its common mimics.

Introduction

Acute paronychia is a bacterial infection of the nail fold that develops over a few days after minor trauma such as nail biting, hangnails, or manicures. Staphylococcus aureus is the most common organism, followed by Streptococcus pyogenes, Pseudomonas, and Proteus; nail biting adds oral flora.

Pathophysiology

A break in the seal between the nail fold and nail plate inoculates the paronychium. Infection starts as cellulitis and may form an abscess in the nail fold, under the nail plate, or in the pulp.

Related Anatomy

The perionychium includes the hyponychium, the paronychium (lateral nail fold), the proximal nail fold and the eponychium. The eponychium produces the non-living keratinized layer, the cuticle, that coats the surface of the nail plate. The nail plate with its lunula covers the germinal matrix and the sterile matrix.

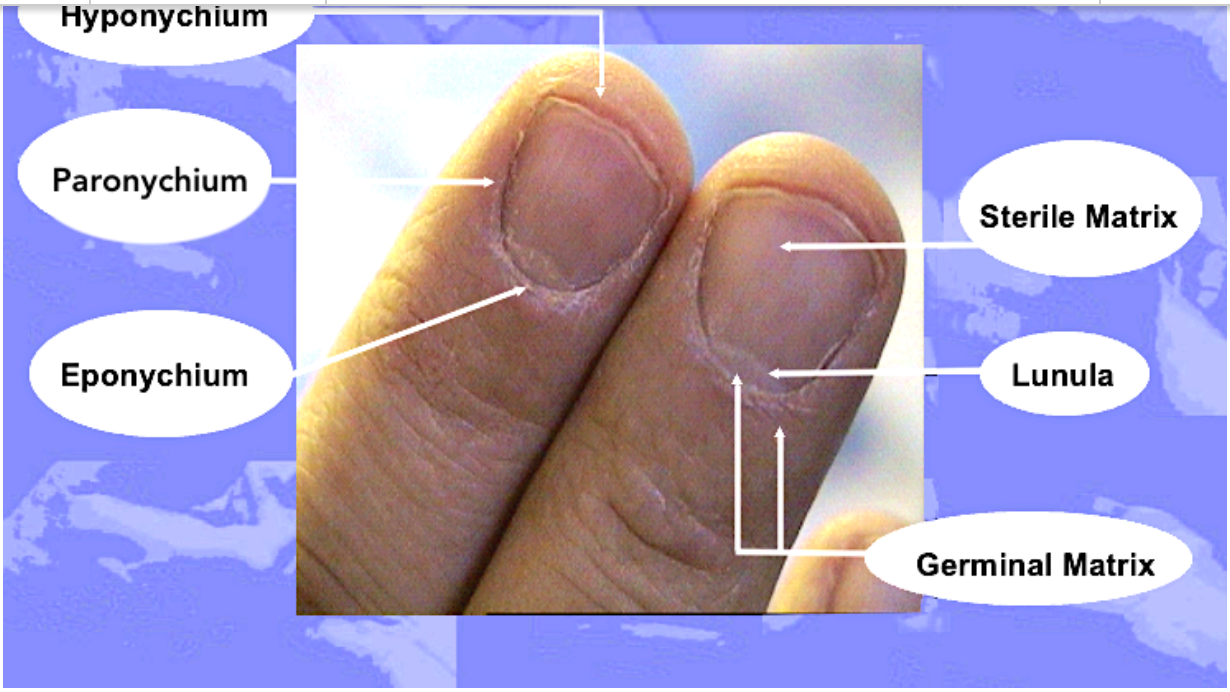


Figure 1. Fingernail Anatomy

Incidence and Related Conditions

Paronychia accounts for roughly 35% of hand infections and is more common in women than man. Diabetes, immunosuppression, steroid use, and chemotherapy-related nail loosening increase risk.

Differential Diagnosis

Herpetic whitlow, felon, chronic paronychia, fungal nail infection (onychomycosis), glomus tumor, malignant melanoma, and gouty tophus. Chronic paronychia is a distinct, months-long condition of water-exposed hands, classically linked to Candida albicans but increasingly viewed as irritant dermatitis.

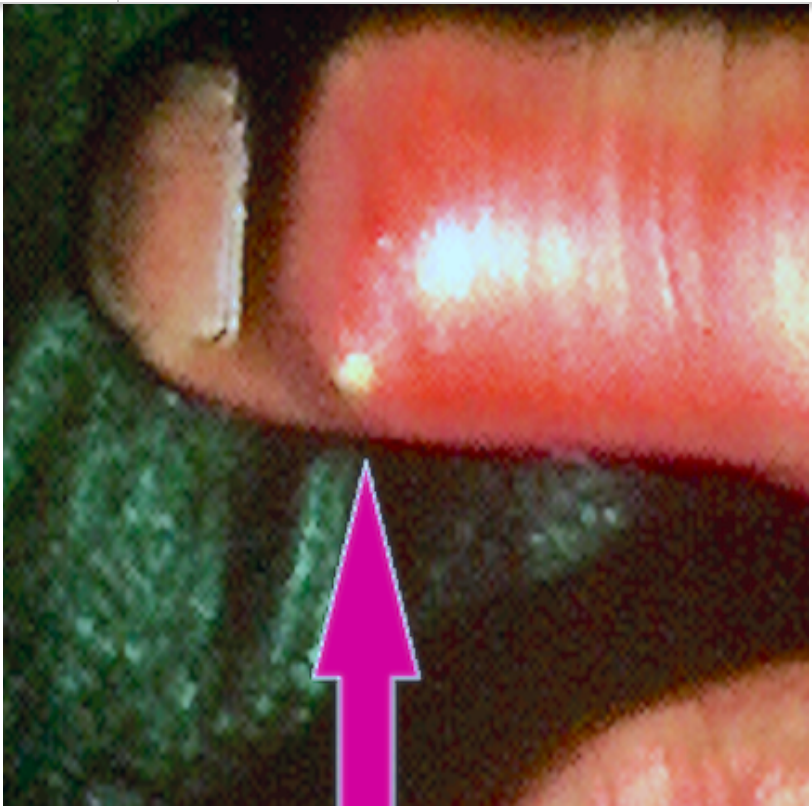


Figure 2. Gouty tophus (arrow)

Symptoms

Throbbing pain, redness, and swelling at the side or base of the nail, sometimes with visible pus. Fever is uncommon.



Figure 3. Early paronychia with previous nail damage



Figure 4. Late paronychia right thumb with dorsal blister from swelling

Typical History

biting.

Examination

Determine whether pus lies in the nail fold or beneath the nail plate. Vesicles suggest herpetic whitlow; green discoloration, Pseudomonas; a thickened, discolored nail, fungal disease; pulp tenderness, felon; and severe pain with bluish discoloration, glomus tumor.

Workup Options

Diagnosis is clinical. Culture any drainage. Bedside ultrasound can confirm an abscess; X-ray to rule out fracture, Seymour fracture in children, osteomyelitis or joint disease, e.g. OA. Blood tests to assess systemic illness.

Conservative Treatment

Without an abscess, warm soaks three to four times daily plus an oral anti-staphylococcal antibiotic (cephalexin, clindamycin, or amoxicillin-clavulanate) is standard. Favor clindamycin or amoxicillin-clavulanate after nail biting, and clindamycin or trimethoprim-sulfamethoxazole where MRSA is prevalent.

Operative Treatment

Drain an abscess under digital block by elevating the nail fold off the nail with a needle, small scissors, or Freer elevator; incise the eponychium only where the abscess points. Remove the portion of nail plate overlying any subungual pus. Pack with gauze for about 48 hours, then resume soaks and culture-directed antibiotics.

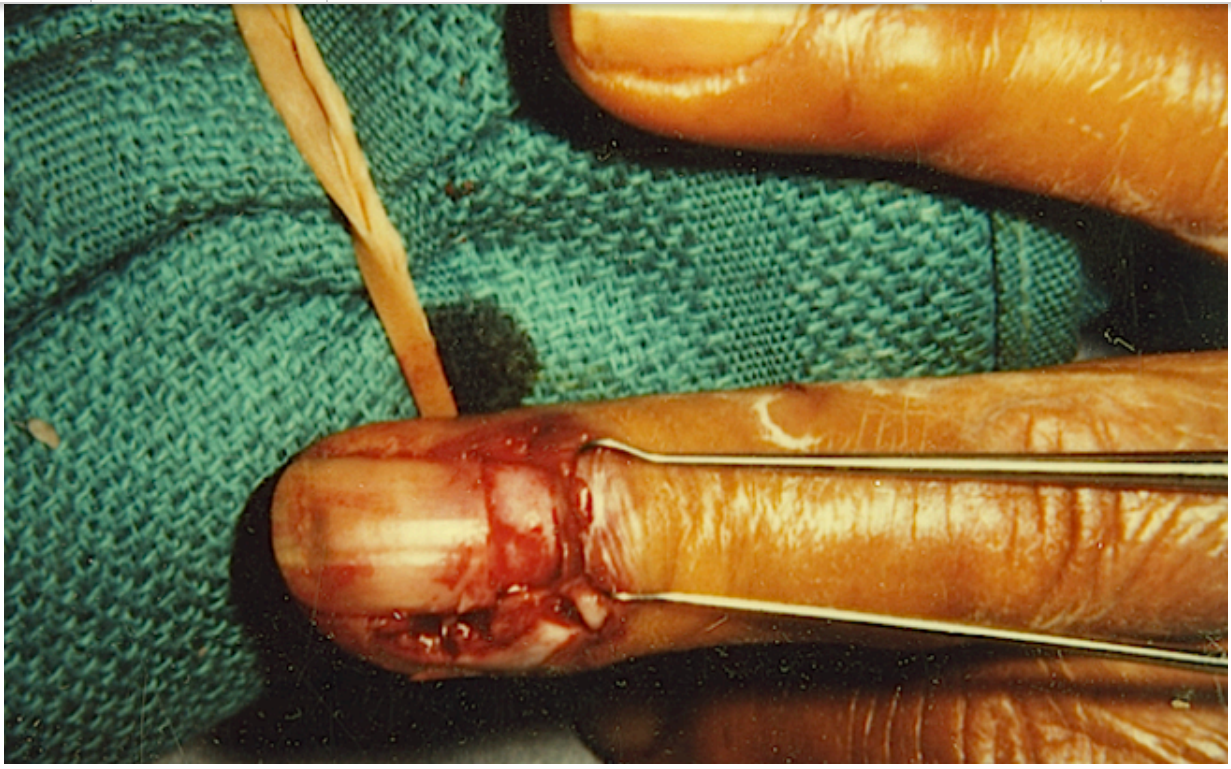


Figure 5. Paronychia Long Finger after I&D of nail fold and excision of proximal nail

Complications

Secondary felon, osteomyelitis, recurrence, and nail deformity. Recurrent episodes should prompt evaluation for chronic paronychia or fungal infection.

Outcomes

Most cases resolve promptly, but evidence is limited to level 4 and 5 studies; no trials establish the best antibiotic, drainage technique, or role of soaks.

Key Educational Points

Treatment follows the pus: no abscess, antibiotics and soaks; nail fold abscess, elevation and drainage; subungual pus, partial nail removal. Never incise herpetic whitlow; treat with antivirals, since surgery risks spread and encephalitis. Chronic paronychia is different so avoid irritants. Use topical steroids and reserve eponychial marsupialization (with nail removal if deformed) for resistant cases.

Recent References

1. Ritting AW, O'Malley MP, Rodner CM. Acute Paronychia. J Hand Surg Am. 2012;37(5):1068-1070.
2. Song E, Seidelman J, Hammert W, Saltzman E. Diagnosis and Management of Hand Infections. J Hand Surg Am. 2024;49(12):1239-1249.
3. Relhan V, Bansal A. Acute and Chronic Paronychia Revisited: A Narrative Review. J Cutan Aesthet Surg. 2022;15(1):1-16. PMID: 35655642.

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