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봉와직염으로 발현한 손목의 원발성 연부조직 결핵: 증례 보고

(Primary Soft-Tissue Tuberculosis of the Wrist Presenting as Cellulitis: A Case Report)



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**Purpose:** Chronic cellulitis-like lesions of the wrist and hand may represent atypical infections. We present a case of soft-tissue tuberculosis involving the hand and forearm, confirmed by tissue-based testing.

**Methods:** A 70-year-old patient developed progressive swelling, erythema, and pain over the dorsal wrist and hand beginning in August 2024 (Figure 1), with poor response to repeated antibiotics. On January 23, 2025, excisional biopsy and debridement were performed under general anesthesia. Specimens from the hand and forearm underwent histopathologic examination, acid-fast bacilli (AFB), Grocott methenamine silver (GMS), and periodic acid-Schiff (PAS) staining, and real-time polymerase chain reaction (PCR) for Mycobacterium tuberculosis (MTB) and nontuberculous mycobacteria (NTM). Systemic evaluation included contrast-enhanced chest CT and sputum AFB studies.

**Results:** Exploration revealed diffuse inflammatory and granulomatous tissue in the deep soft tissues of the dorsal wrist and hand, extending into the forearm, without a drainable abscess (Figures 2–3). Histopathology showed chronic non-caseating granulomatous inflammation suspicious for tuberculosis; AFB, GMS, and PAS stains were negative. PCR was positive for MTB and negative for NTM. Chest CT showed pulmonary nodules and lymphadenopathy interpreted as inflammatory or nonspecific, and sputum AFB smears and cultures were negative. Anti-tuberculous therapy was started after surgery. The wound healed uneventfully, with no recurrence at 8 months of follow-up (Figure 4).

**Conclusion:** Soft-tissue tuberculosis of the wrist and hand may mimic chronic cellulitis, and negative AFB staining or sputum studies do not exclude the diagnosis. In persistent cases, early deep-tissue biopsy with MTB/NTM PCR should be considered to avoid diagnostic delay and progressive soft-tissue damage.



Figure 1. Preoperative photograph showing diffuse swelling and erythema over the dorsal wrist and hand.



Figure 2. Intraoperative photograph demonstrating inflammatory and granulomatous soft-tissue involvement of the dorsal wrist and hand..



Figure 3. Intraoperative photograph showing proximal extension of the inflammatory lesion into the forearm with excised tissue submitted for biopsy.



Figure 4. Postoperative photograph at 8 months showing complete wound healing without recurrence.