

# *Histoplasma* Tenosynovitis Revealed by Fungal Culture in a Patient Treated with Infliximab

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We present here what may be the first reported case of *Histoplasma* tenosynovitis in a patient treated with a tumor necrosis factor (TNF) blocker.

A 50-year-old woman with a history of Takayasu arteritis (since age 33) and ulcerative colitis (age 47) presented with 4 weeks of pain and swelling of the palmar aspect of the right hand and wrist (Figure 1A). Six weeks earlier, she had received a glucocorticoid injection into the right carpal tunnel in response to tingling of the fingers. Immunosuppressive

medications included a stable regimen of infliximab, methotrexate, and low-dose prednisone.

C-reactive protein and white blood cell count were normal. Serology panel for endemic fungi (by complement fixation to yeast and mycelial phases) and *Histoplasma* urine antigen were negative, as were fungal, mycobacterial, and routine blood cultures. In the operating room, the patient was found to have tenosynovitis of essentially all flexor tendons of the distal forearm, wrist, and proximal hand, albeit without

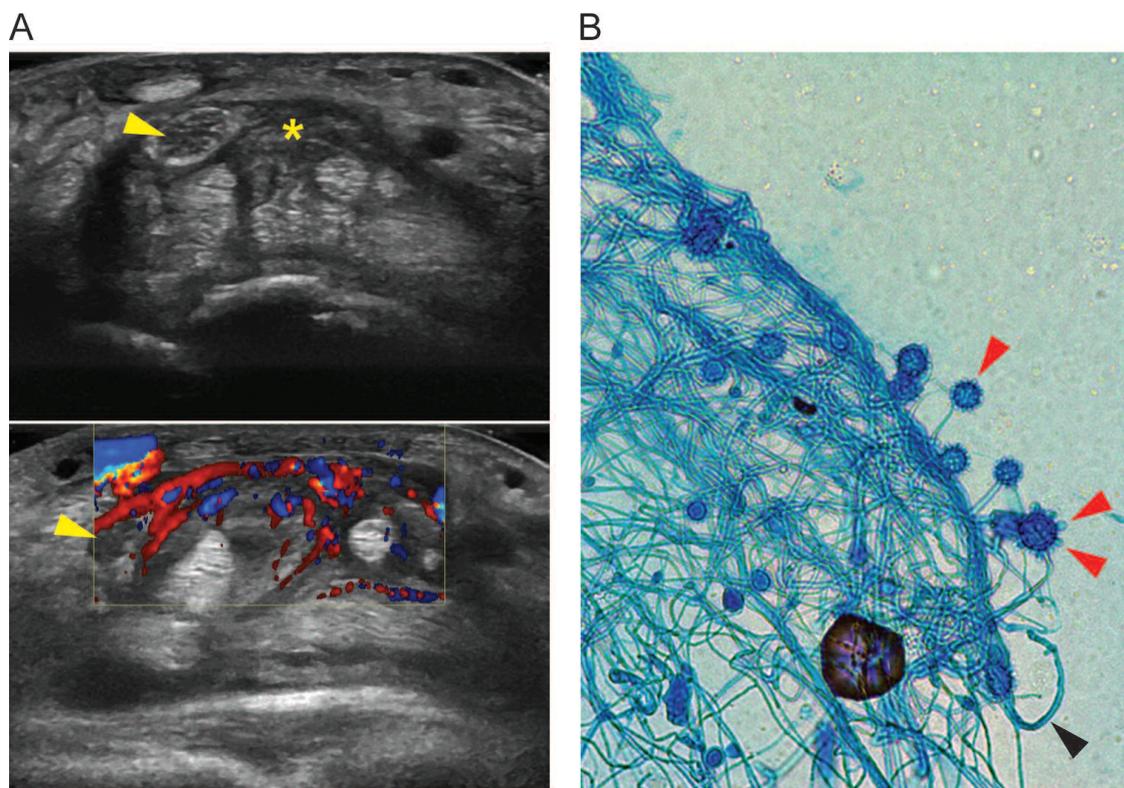


Figure 1. A. Short axis ultrasound of the wrist at the level of the carpal tunnel. Top panel: greyscale image of the flexor compartment demonstrates extensive hypoechoic soft tissue (asterisk) surrounding the flexor tendons and thickened median nerve (arrowhead). Bottom panel: the described hypoechoic soft tissue is markedly hyperemic on color Doppler images, including hyperemic soft tissue surrounding the median nerve (arrowhead). Findings are consistent with extensive flexor tenosynovitis. The extensor compartment of the wrist was unremarkable. B. Incubation of the surgical specimen at 30°C produced mycelial phase *Histoplasma capsulatum* with hyphal elements (black arrowhead) and macroconidia 8-15 microns in diameter with characteristic circumferential projections (red arrowheads). Verification was by Accuprobe *H. capsulatum* culture identification test (Hologic Inc.).

frank purulence. Crystal examination was negative. Histopathology revealed non-necrotizing granulomatous inflammation.

In this patient, the differential diagnosis included infection with indolent bacteria (*Nocardia*, *Coxiella*, *Bartonella*), mycobacteria, *Candida* (given recent injection), endemic fungi (*Histoplasma* or *Sporothrix*), and other molds (*Aspergillus*). Inflammatory bowel disease-associated arthritis and sarcoidosis were also considered. After 14 days, the fungal culture (surgical specimen) grew an organism (Figure 1B). Itraconazole was initiated the same day.

*Histoplasma* is a rare cause of tenosynovitis<sup>1</sup>. To our knowledge, this is the first reported case in a patient treated with a TNF blocker. *Histoplasma* urine antigen is positive in 90% of cases of disseminated histoplasmosis<sup>2</sup>, including those receiving TNF blockers<sup>3</sup>; however, the sensitivity of

this test in the context of localized, extrapulmonary infection has not been established. In this case, the correct diagnosis was only revealed upon fungal culture of the surgical specimen.

## REFERENCES

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