

# An Elusive Sexually Transmitted Infection

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## OBJECTIVES

- Describe the significance of history and physical examination in aiding early diagnosis of disseminated gonococcal infection (DGI)
- Recognize that a low threshold for suspicion of DGI is essential in all sexually active individuals irrespective of age
- Recognize that Nucleic acid amplification testing (NAAT) is the preferred diagnostic test for Neisseria gonorrhoea (N. gonorrhoea), and cultures may frequently be negative

## CASE DESCRIPTION

57-year-old male with a history of controlled ulcerative colitis presented to the Emergency Department with right knee and ankle swelling, erythema, pain, and difficulty bearing weight, with progressive worsening since onset ten days ago. He had two prior healthcare encounters where he was diagnosed with cellulitis and prescribed Trimethoprim-Sulfamethoxazole. With no improvement in symptoms, he sought help a third time. Detailed questioning uncovered presence of pain and erythema at the right 4th metacarpophalangeal joint and dysuria one week before developing his arthritic symptoms.



He was in a monogamous relationship with a female partner for three years and did not use barrier contraception. On examination, his vitals were stable. Swelling, erythema, tenderness, and limited range of motion at both right knee and ankle were noted. Knee ultrasound demonstrated a complicated joint effusion extending into the suprapatellar region and popliteal fossa.



Similar collections were found around his right ankle. He underwent open arthrotomy at both sites, and a large amount of purulent fluid was drained. Blood and synovial fluid cultures were negative. However, NAAT of synovial fluid revealed N. gonorrhoea. He was treated for DGI with intravenous Ceftriaxone for three weeks and one dose of intravenous Azithromycin. His symptoms resolved.

## DISCUSSION

N. gonorrhoea is a relatively uncommon cause of infective arthritis. However, a low threshold for suspicion should be maintained for DGI in all sexually active individuals. Although most cases have been reported in younger adults, there have been reports in an older population. (1) Clinicians risk underdiagnosing sexually transmitted infections in the older age cohort if a detailed history is not elicited. Localized infection involving the urethra, cervix, rectum, or pharynx usually manifests before development of DGI. This information, if elicited, helps guide diagnosis. A careful physical examination (examining other joints, skin, and mucosa) is equally crucial. Findings of asymmetric arthritis, pustular or vesiculopustular skin lesions, and/or tenosynovitis may alert the clinician to the possibility of DGI.

Diagnosis can be confirmed by identifying N. gonorrhoea in blood, synovial fluid, or skin lesion. This organism requires specific culture media, typically Thayer Martin Agar, and results are often unrevealing. NAAT is the preferred diagnostic test. (2)

Prognosis is excellent when DGI is diagnosed early, and treatment is initiated promptly. Most patients recover with minimal or no long-term complications.

## REFERENCES

- (1) Disseminated gonococcal infection in an elderly Japanese man. Hagiya H, Onishi N, Ebara H, Hanayama Y, Kokeguchi S, Nose M, Kusano N, Otsuka F. Intern Med. 2013;52(23):2669-73.
- (2) Recommendations for the laboratory-based detection of Chlamydia trachomatis and Neisseria gonorrhoeae--2014. Centers for Disease Control and Prevention. MMWR Recomm Rep. 2014;63(RR-02):1.