

Gonococcal Septic Arthritis of the First MTP Joint: The Importance of Sexual History in Older Patients

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Background

Septic Arthritis is an intra-articular joint infection that can lead to permanent joint dysfunction and destruction if not accurately diagnosed and treated.¹

Common symptoms include:

- Swelling of the joint
- Erythema and warmth of the surrounding tissue
- Acutely painful joint
- Fever / Chills
- Decreased ROM of joint

Commonly affected joints:

- Knee (50% of cases)
- Hip, Wrist, Ankle



Picture 1. This photo is a depiction of how a joint with septic arthritis would appear.²

Common bacteria associated with septic arthritis:³

- Staphylococcus aureus (MC)
- Streptococcus species
- Neisseria gonorrhea
- Aerobic gram-negative bacteria

Predisposing factors for septic arthritis include:⁴

- Alcoholism, IV Drug Use
- Advanced age
- Immunosuppression (including Diabetes)
- Pre-existing joint disease
- Recent joint surgery or injection
- Past history of septic arthritis

Case Description

61 yo F presenting with right first MTP pain

11/14/23

Urgent Care Visit

Patient presented to urgent care for swollen right 1st MTP joint. Was prescribed colchicine for gout.

11/14/23

Sought Second Opinion

Patient sought a second opinion and provider prescribed Keflex and Bactrim for presumed septic arthritis.

11/22/23

Primary Care Office Visit

Patient presented to PCP still unable to bear weight on right foot despite completing Keflex and Bactrim regimen. Patient never initiated colchicine.

History

- PMHX of HTN, T2DM, obesity, and HLD
- NKDA. No known environmental allergies.
- Medications included lisinopril, simvastatin, metformin, and empagliflozin.
- Former smoker, drinks 3-5 beers a day, no recreational drug use.
- **Currently sexually active with two new male partners in the past 8 months with no condom use.**

Physical Examination

- Afebrile (98.9F), HR: 66bpm, BP 134/82
- Pleasant, well-groomed female in no acute distress.
- **Swelling, erythema, and warmth on the plantar surface of the 1st right MTP joint.** No swelling or warmth on the dorsal aspect of the foot.
- **Decreased ROM of 1st right MTP joint.** No joint deformities or swelling in the left foot.



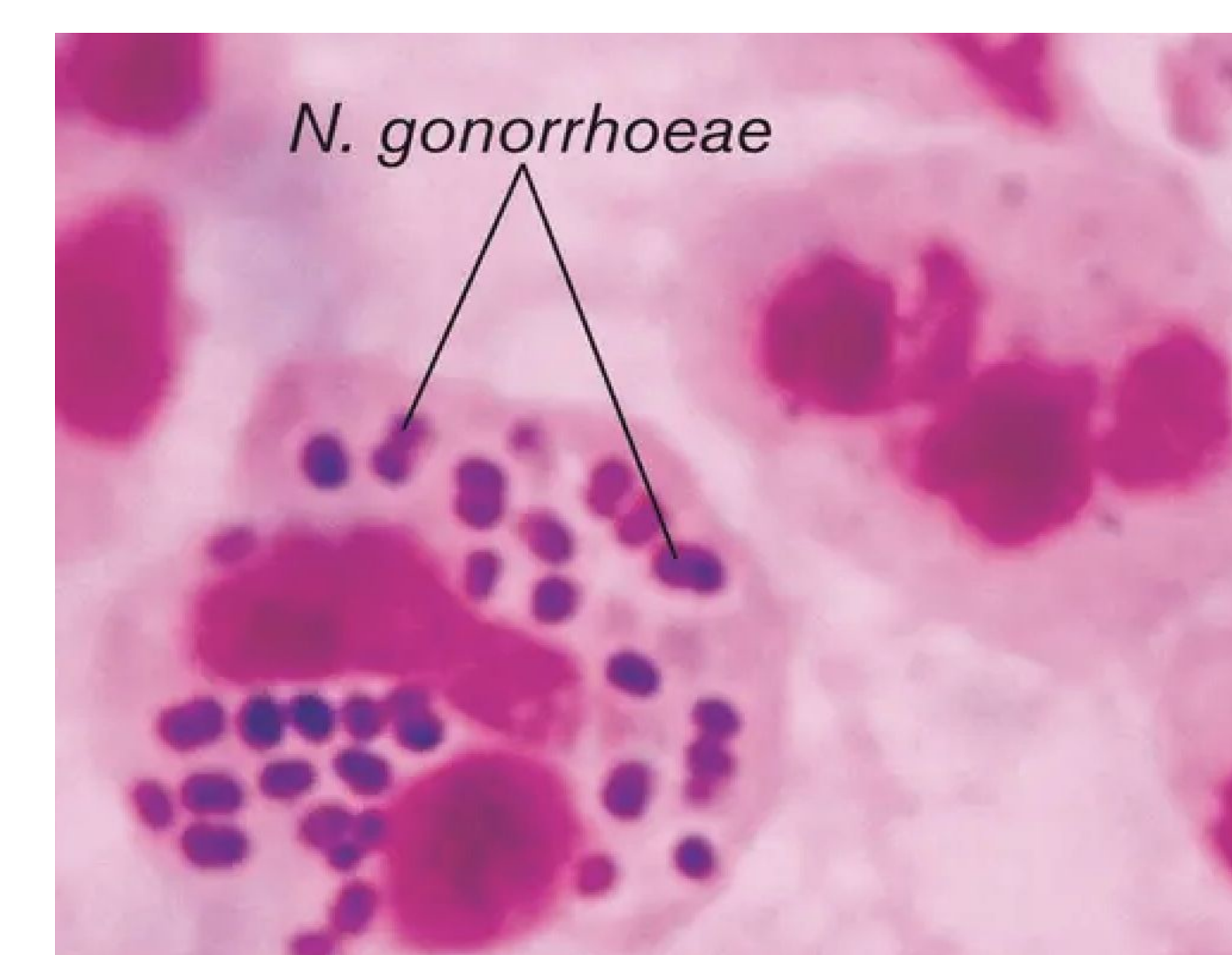
Picture 2. Picture of patient's foot.

Assessment and Plan

- DDX: Gouty Arthritis vs. Septic Arthritis
- Given patient's sexual history, important to consider STI origin of infection.
- Consented to obtaining a uric acid, CBC, and urine gonorrhea/chlamydia.
- Patient declined in-office joint aspiration.
- Instructed to start the colchicine that was previously prescribed and never initiated while labs were pending.
- Instructed to avoid foods that are high in purines and that could exacerbate gouty arthritis.

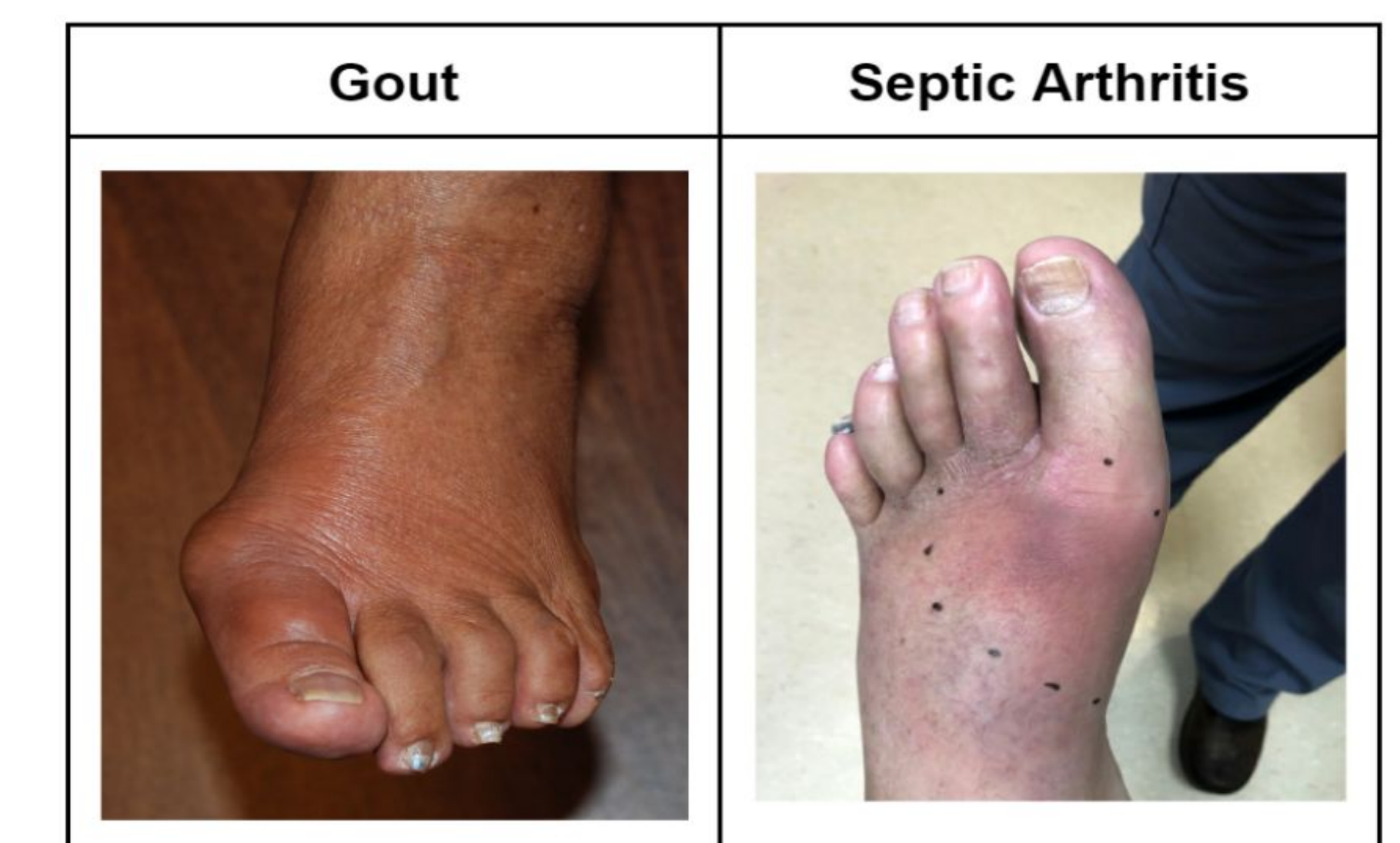
Results

- **Urine Gonorrhea was positive.**
- Uric acid and CBC were WNL.



Picture 3. Neisseria gonorrhoeae on cytology.

Outcome & Follow-Up



Picture 4. Comparison of the presentation of gout and septic arthritis, respectively.

- Patient sent to the ED for joint aspiration, cytology and culture, which were **positive for N. gonorrhoeae.**
- Patient started on **2g Ceftriaxone IM x 14 days.** First dose received in ED. Subsequent doses filled at pharmacy, and administered by PCP daily.

Patient followed up 3 weeks later with PCP and complete resolution of symptoms.

Learning Points

- Swollen 1st MTP joint has a **broad differential**
 - Full workup is crucial to diagnosis and prompt treatment.
- Thorough **sexual history** should be conducted in setting of any potential joint infection below the waist.
- **Avoid making assumptions** about a patient's sexual activity regardless of age, gender, sex, race, socioeconomic status

References

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