

Circinate oral and genital mucositis



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A 33-year-old man presented with a 3-week history of lesions over the glans along with swelling of the left knee and the right ankle. He reported dysuria and urethral discharge 1 month before that was treated with amoxicillin and clavulanic acid for 4 days with partial improvement. No fever, malaise, or diarrhea were reported by the patient. Physical examination features are shown in figures (Figs 1 and 2).

Preliminary laboratory tests found pyuria on first-void urine sample and negative serological testing for HIV and syphilis. Polymerase chain reaction tests for *Chlamydia trachomatis*, *Neisseria gonorrhoeae*, *Mycoplasma genitalium*, and *Ureaplasma urealyticum* from the first-void urine sample were negative.

Question 1: What is the most likely diagnosis?

- A. Reactive arthritis
- B. Lichen planus
- C. Behçet syndrome
- D. Herpes simplex infection
- E. Secondary syphilis

Answers:

A. Reactive arthritis – Correct. The patient presented with urethritis, arthritis, and mucosal oral and genital lesions. Typical mucocutaneous manifestations of reactive arthritis include circinate balanitis, keratoderma blenorrhagicum, and nail changes, similar to psoriatic nails with onycholysis, pitting, and subungual hyperkeratosis or periungual

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pustules. Oral lesions are uncommon and have been reported as red patches, painless erosions, and ulcers occurring on the tongue, palate, buccal mucosa and lips, glossitis, and geographic tongue.^{1,2} Previous investigators have described the oral lesions as psoriasiform or as ectopic geographic tongue because of its morphology,^{3,4} but images have been scarcely reported. There are no established diagnostic criteria for reactive arthritis, and its diagnosis relies on medical history and clinical findings. Patients rarely present with the classic triad of conjunctivitis, urethritis, and arthritis.

B. Lichen planus — Incorrect. Buccal mucosa and tongue are most often involved in oral lichen planus, with white streaks, often forming a lace-work (reticular form) or white plaques. Male genitalia involvement often includes annular lesions or flat-topped papules affecting most frequently the glans penis. Oral ulcerative lesions are especially painful (patient's oral lesions were unnoticed) and can be surrounded by the reticular form on its edges.

C. Behçet syndrome — Incorrect. The typical lesions in Behçet syndrome are multiple and recurrent painful aphthous lesions over the mouth and genitals, along with eye involvement or skin involvement (pseudofolliculitis, erythema nodosum, acneiform lesions).

D. Herpes simplex infection — Incorrect. Herpes simplex infection occurs typically with painful ulcers along with swollen lymph nodes.

E. Secondary syphilis — Incorrect. Secondary syphilis would show a positive serologic test result for syphilis (treponemal and nontreponemal tests).

Question 2: What additional study may help confirm the diagnosis?

- A.** Chest radiograph
- B.** Schirmer test
- C.** HLA-B27 determination
- D.** Fungal culture
- E.** Skin pathergy test

Answers:

A. Chest radiograph — Incorrect. Reactive arthritis does not involve lungs. Involvement of thoracic spine and thoracic joints is uncommon. Visceral involvement is rare and may include aortic valvular insufficiency, heart block, or pericarditis.

B. Schirmer test — Incorrect. Schirmer test is used to confirm Sjögren syndrome.

C. HLA-B27 determination — Correct. Although is not a defining laboratory finding, HLA-B27 is detected in up to 70% of the patients with reactive arthritis; positivity is associated with more severe symptoms and greater risk of chronicity.

D. Fungal culture — Incorrect. Clinical features are not suggesting mucosal candidiasis. The tongue is the most affected site in oral mucosa, and the patient did not report soreness or burning sensation on the lesions. *Candida balanitis* usually presents as erythematous or whitish macules and papules over the glans, along with soreness or itchiness.

E. Skin pathergy test — Incorrect. Skin pathergy test positivity is a defining criterion for Behçet syndrome.

Question 3: What treatment would NOT be indicated in this patient?

- A.** Dapsone
- B.** Topical corticosteroids
- C.** Nonsteroidal anti-inflammatory drugs
- D.** Sulfasalazine
- E.** Antibiotic therapy of triggering infection

Answers:

A. Dapsone — Correct. Dapsone is used in dermatology for the treatment of inflammatory dermatoses like dermatitis herpetiformis, IgA linear bullous disease, subcorneal pustulosis, erythema elevatum et diutinum, Sweet syndrome, and acne fulminans, among others.

B. Topical corticosteroids — Incorrect. Skin and mucosal lesions can be treated with topical treatments, including corticosteroids and keratinolytic agents.

C. Nonsteroidal anti-inflammatory drugs — Incorrect. Most patients will also need treatment of joint symptoms, including analgesics, corticosteroids, nonsteroidal anti-inflammatory drugs or local steroid injections.

D. Sulfasalazine — Incorrect. Patients with chronic arthritis not responding to therapy with corticosteroids or nonsteroidal anti-inflammatory drugs may need other treatment options including sulfasalazine, retinoids, methotrexate, or azathioprine.

E. Antibiotic therapy of triggering infection — Incorrect. Appropriate antibiotic treatment of initiating genitourinary infection is fundamental, especially when triggered by *C trachomatis*. Our patient was given doxycycline, 100 mg twice a day for 7 days, to treat the urethritis, with resolution of the pyuria but persistence of the mucocutaneous lesions and the joint symptomatology. There is no current evidence that treatment of gastrointestinal infection has an effect on the severity and duration of reactive arthritis.

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