

## CLINICAL PRACTICE

## Clinical Images

## The Oil Drop Sign

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KEY WORDS: rheumatology; dermatology; psoriasis; clinical image.

J Gen Intern Med 34(9):1946

DOI: 10.1007/s11606-019-05159-4

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A 26-year-old woman presented with subacute atraumatic pain and swelling of her right knee and left foot. The right knee was erythematous and warm with an associated joint effusion; the second and third metatarsophalangeal joints and extensor tendons of the left foot were erythematous, warm, and tender. There were well-demarcated erythematous plaques involving the posterior neck. The nail bed of the right fifth digit had a circular area of yellow discoloration with a well-demarcated rim of brown discoloration, resembling a drop of oil (see Fig. 1). Synovial fluid from the knee contained 15,541 WBC/ $\mu$ L, and no organisms were identified. Serologic workup was negative, including antinuclear antibody, anti-double stranded DNA, and rheumatoid factor. Urine and synovial fluid nucleic acid amplification tests for *Neisseria gonorrhoeae* were negative.

The oil drop sign is caused by nail bed parakeratosis and psoriasiform hyperplasia and is a physical finding of psoriasis (<sup>1-3</sup>). Nail psoriasis is common in patients with psoriatic arthritis and can involve the nail matrix (e.g., pitting, trachyonychia, dystrophy, leukonychia) or the nail bed (e.g., onycholysis, subungual hyperkeratosis, oil drop, splinter hemorrhages) (<sup>4, 5</sup>). This patient was diagnosed with psoriasis and started on methotrexate, etanercept, and diclofenac, resulting in a steady improvement in symptoms.

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Received December 11, 2018

Revised March 26, 2019

Accepted June 13, 2019

Published online July 16, 2019



**Figure 1** A circular area of discoloration involving the nail bed of the right fifth digit, known as the oil drop sign (arrows, images 1 and 2).

**Compliance with Ethical Standards:**

**Conflict of Interest:** The authors declare that they do not have a conflict of interest.

## REFERENCES

1. Kouskoukis CE, Scher RK, and Ackerman AB. The "oil drop" sign of psoriatic nails: A clinical finding specific for psoriasis. *Am J Dermatopathol* 5.3 (1983): 259–262.
2. Haneke E. Nail psoriasis: clinical features, pathogenesis, differential diagnoses, and management. *Psoriasis (Auckland, NZ)* 7 (2017): 51.
3. Roberts K. Clinical Pediatric Dermatology. *Am J Dis Children* 136 5 (1982): 475–475.
4. Jiaravuthisan MM, et al. Psoriasis of the nail: anatomy, pathology, clinical presentation, and a review of the literature on therapy. *J Am Acad Dermatol* 57.1 (2007): 1–27.
5. Haneke E. Nail disorders. In: Goldsmith LA, Katz SI, Gilchrist BA, Paller AS, Lefell DJ, Wolff K, editors. *Fitzpatrick's Dermatology in General Medicine*. 9th ed. New York: McGraw-Hill; 2017. In press.

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