Photo Quiz

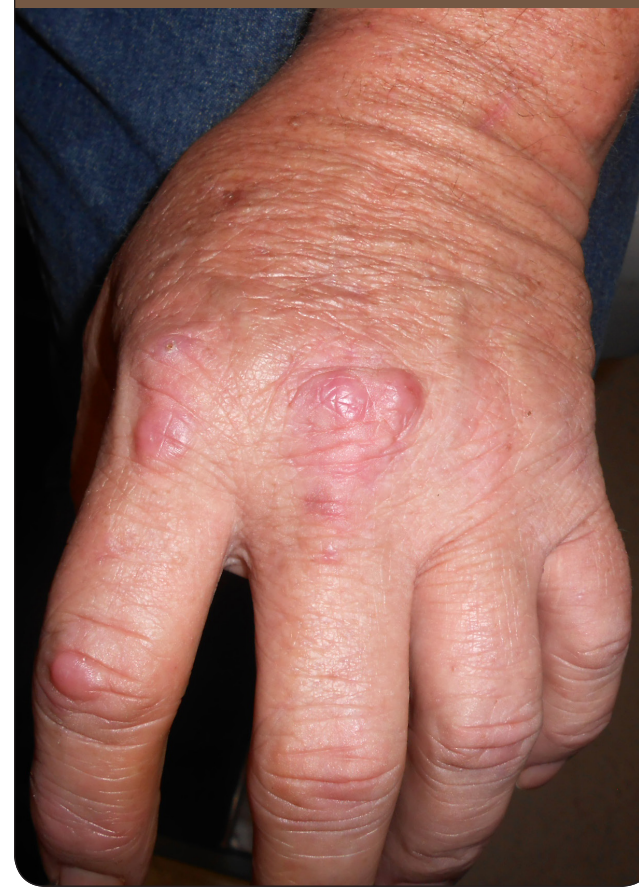
Nodules on the Knuckles

Micah Pippin, MD, Louisiana State University Health Sciences Center, Family Medicine Residency, Alexandria, Louisiana

A 55-year-old man presented with nonpainful, red masses on his knuckles that had been recurring for years. The lesions generally lasted for one month then resolved spontaneously. He was a mechanic, and job-related trauma exacerbated the condition. He also had arthralgias in several joints, including bilateral hands, hips, and knees. During one episode, he was prescribed an oral steroid that seemed to relieve his symptoms.

Physical examination revealed several erythematous, nontender nodules involving his metacarpophalangeal and proximal interphalangeal joints *(Figure 1)*. The nodules were firm and varied in size. There was no skin erosion, signs of infection, neurologic dysfunction, or decreased range of motion. The patient requested treatment because the nodules were interfering with his work.

FIGURE 1



Question

Which one of the following therapies should have been offered?

- ☐ A. Intralesional steroid injection.
- ☐ B. Topical steroids.
- ☐ C. Nonsteroidal anti-inflammatory drugs.
- ☐ D. Surgery.

See the following page for discussion.

The editors of *AFP* welcome submissions for Photo Quiz. Guidelines for preparing and submitting a Photo Quiz manuscript can be found in the Authors' Guide at https://www.aafp.org/afp/photoquizinfo. To be considered for publication, submissions must meet these guidelines. Email submissions to afpphoto@aafp.org.

This series is coordinated by John E. Delzell Jr., MD, MSPH, associate medical editor.

A collection of Photo Quiz published in *AFP* is available at https://www.aafp.org/afp/photoquiz.

Previously published Photo Quizzes are now featured in a mobile app. Get more information at https://www.aafp.org/afp/apps.

Author disclosure: No relevant financial affiliations.

Discussion

The answer is A: intralesional steroid injection. Rheumatoid nodulosis is the development of nodules on the hands associated with rheumatoid arthritis.[1,2] These rheumatoid nodules are the most common cutaneous manifestation of rheumatoid arthritis, occurring in 30% to 40% of patients.[3] The nodules are firm or rubbery and tend to occur on extensor surfaces adjacent to joints, commonly on the hands, elbows, and knees. The presence of subcutaneous rheumatoid nodules is associated with an increased risk of cardiovascular disease, as well as cardiovascular, respiratory, and all-cause mortality.

The nodules are usually nontender, and treatment is initiated only for cosmetic or functional reasons. Local glucocorticoid injections have been shown to decrease the size of subcutaneous rheumatoid nodules.[4]

Although rheumatoid nodules are common, they are not among the diagnostic criteria for rheumatoid arthritis.[5] Treatment of rheumatoid arthritis with methotrexate and other disease-modifying antirheumatic drugs can increase the frequency and number of rheumatoid nodules—a condition known as accelerated nodulosis. Discontinuing methotrexate may improve nodulosis, but this may enhance the long-term progression of joint destruction in rheumatoid arthritis.[4]

Topical steroids are used for ophthalmic manifestations of inflammatory conditions but have not been shown to be effective for treating rheumatoid nodulosis.[5]

Treatment with nonsteroidal anti-inflammatory drugs, such as ibuprofen, may improve the pain associated with rheumatoid nodules but does not decrease the size or number of nodules.

Surgery is reserved for patients with neurologic dysfunction or significantly decreased functionality.

Address correspondence to Micah Pippin, MD, at mpipp2@lsuhsc.edu. Reprints are not available from the author.

References

1. Rheumatoid arthritis. In: Usatine RP, Smith MA, Mayeaux EJ, et al., eds. *The Color Atlas of Family Medicine*. 3rd ed. McGraw-Hill; 2018.
2. Wasserman A. Rheumatoid arthritis: common questions about diagnosis and management. *Am Fam Physician*. 2018;97(7):455-462.
3. Turesson C, Jacobsson LT. Epidemiology of extra-articular manifestations in rheumatoid arthritis. *Scand J Rheumatol*. 2004;33(2):65-72.
4. UK National Rheumatoid Arthritis Society. Rheumatoid nodules. What are rheumatoid nodules? Accessed October 31, 2019. https://www.nras.org.uk/rheumatoid-nodules
5. Aletaha D, Neogi T, Silman AJ, et al. 2010 rheumatoid arthritis classification criteria: an American College of Rheumatology/European League Against Rheumatism collaborative initiative [published correction appears in *Ann Rheum Dis*. 2010;69(10):1892]. *Ann Rheum Dis*. 2010;69(9):1580-1588. ■