

## Images in Rheumatology

# Perforating Rheumatoid Nodule Mimicking Malignant Soft-tissue Mass of the Forearm

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Rheumatoid nodule<sup>1</sup>, one of the most characteristic manifestations of rheumatoid arthritis (RA), occurs in approximately 30% of patients, is generally associated with positive rheumatoid factor, smoking, and high disease activity<sup>2</sup>, and occurs in some patients with specific genotypes receiving methotrexate (MTX)<sup>3</sup>.

An 83-year-old woman with a history of anticitrullinated protein antibody-positive RA treated by oral MTX, as well as gout, was hospitalized for a growing tumor of her right forearm. She had a 3-day history of intermittent fever. The clinical examination revealed a firm, painless subcutaneous mass with a 4 cm diameter budding and hemorrhagic ulceration, and an axillary lymphadenopathy. The radiograph showed a rounded soft-tissue thickening of the distal forearm and typical radiological features of RA in the right hand (Figure 1). Laboratory tests showed systemic inflammation with C-reactive protein levels of 94 mg/L (reference value < 5 mg/L), a normal serum uric acid level (190  $\mu$ mol/L, reference value 155–355  $\mu$ mol/L), and negative blood cultures. Ultrasonography and magnetic resonance imaging revealed a large encapsulated soft-tissue mass with peripheral inflammatory rim, whose appearance suggests a malignant tumor rather than a rheumatoid tenosynovitis or gouty tophi. The surgical biopsy exhibited nodular granulomatous tissue reaction pattern containing lymphocytes and

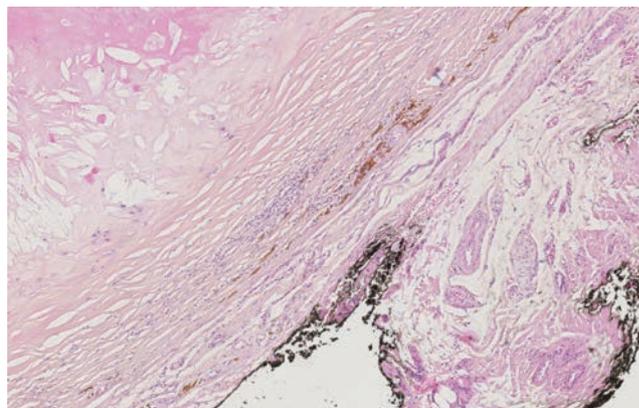


Figure 2. Histology of the lesion: rheumatoid nodule.

palisading epithelioid histiocytes, leading to the diagnosis of perforating rheumatoid nodule with subsequent local infection (Figure 2). The patient refused the complete surgical excision and was treated by oral antibiotics and dressings, which allowed the regression of clinical and biological inflammatory signs in a few days.

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Figure 1. Right hand (radiograph and photograph): oblique view.