A Familiar Face in an Unfamiliar Place: Intraosseous Rheumatoid Nodule

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Rheumatoid arthritis (RA) is a chronic multisystemic autoimmune disease characterized by inflammatory arthritis and extraarticular involvement. The rheumatoid nodule is the most common cutaneous manifestation of RA and is commonly found on pressure points but may also present in uncommon places with varied appearances.

A 67-year-old man with a 4-year history of RA underwent computer tomography for interstitial lung disease. Incidentally, a lytic lesion in the inferior angle of his right scapula (Figure 1A) was noted, slowly enlarging over the past 2 years. Magnetic resonance imaging showed an enhancing marrow-replacing lesion with extraosseous extension through a cortical defect (Figure 1B).

At this point, differentials for this lesion included atypical infection like tuberculosis, as well as neoplasms including metastasis or myeloma. Geode was considered but deemed unlikely; although a spectrum of subchondral cystic lesions like geodes are associated with rheumatoid nodules, in our case, the intraosseous lesion was composed of enhancing soft tissue rather than being cystic in nature (Figure 1B). In addition, the pathogenesis for these subchondral cystic lesions is postulated to be from synovial infiltration at articular joint surfaces, but the involved scapula is nonsynovial.

After multidisciplinary discussion, a biopsy was deemed necessary, and soft tissue and bony samples were obtained. Histopathological examination showed necrobiotic granulomas (Figure 2). With the history of RA, this solidified the diagnosis of intraosseous rheumatoid nodule.

Intraosseous rheumatoid nodules are exceedingly rare, with few described cases in the literature. A multidisciplinary approach and pragmatic workup of these unusual lesions are recommended to exclude serious etiologies.

Figure 1. (A) Coronal CT of the thorax shows a lytic lesion along the inferior angle of the right scapula with cortical break. (B) Contrast-enhanced MRI of the right scapula shows a marrow infiltrating lesion with extraosseous extension into the adjacent serratus anterior. CT: computed tomography; MRI: magnetic resonance imaging.

Figure 2. A granuloma containing central fibrinoid necrosis with surrounding histiocytes and multinucleated giant cells (H&E stain, 100×). Fungal elements, acid-fast bacilli and amyloid were not identified on special stains.
REFERENCES