

AN UNUSUAL CASE OF OSTEIOD OSTEOMA  
MISDIAGNOSED AS INFLAMMATORY JOINT DISEASE  
AND COMPLEX REGIONAL PAIN SYNDROME I

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Osteoid osteomas are benign osteoblastic tumors of the bone which are frequently located in long bones and rarely in carpal bones<sup>1</sup>. A patient with an osteoid osteoma located in the scaphoid bone, who had been misdiagnosed and treated as inflammatory arthritis and complex region pain syndrome I (CRPS I) in various clinics, and in whom the diagnosis was delayed for 18 months is presented.

A 21-year-old male patient was referred to our clinic with complaints of swelling, pain, and limitation of motion in the left wrist (Figure 1-a). The onset of the symptoms had occurred 18 months before. The patient did not describe any predisposing factors, such as trauma or force. He sought treatment at 6 different clinics during the 18 months and used various medical therapies (mainly NSAIDs) with the diagnosis of monoarthritis and CRPS I. Since his complaints were not relieved, he was referred to our clinic. The patient claimed that his pain had partially, but not completely, been relieved with NSAIDs and was quite intense, particularly at nights. His physical examination revealed swelling, local warmth, severe pain with pressure on the left wrist, and an increase in the circumference of the left wrist compared to the right wrist of 2 cm. Movements of the wrist were almost completely limited. Mild osteopenia in the left wrist and an area of indistinguishable sclerosis superimposed on the scaphoid bone was observed on radiography (Figure 1-b). According to the MRI results, diffuse bone marrow edema in the carpal bones, effusion in the joint spaces, synovial thickening (synovitis?), and a millimetric nodular image with a hypointense signal character in the T1a-T2a series on the distal aspect of the scaphoid bone were observed (Figures 1-c and 1-d). The lesion reported consistent with osteoid osteoma. The metacarpal and phalangeal borders were intact and the bone

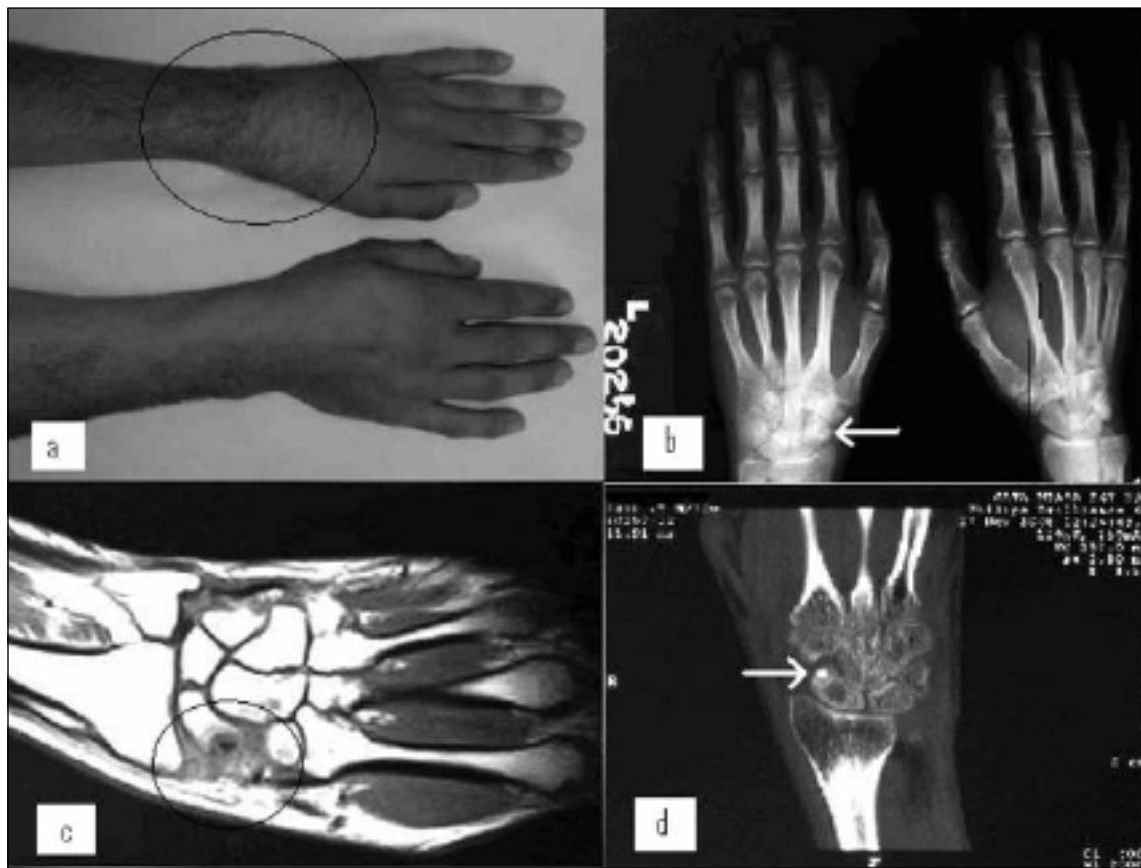
marrow signals were natural. According to Tc99m methylene diphosphonate three-phase bone scintigraphy, increased activity involving the area that corresponded with the distal aspect of the scaphoid bone of the left hand, reactive arthritic changes, or CRPS were reported. The pathologic examination after surgical excision was reported as an osteoid osteoma.

In cases of osteoid osteomas with intra-articular or juxta-articular localization, interpretation of the clinical appearance might be more difficult, since joint-related symptoms and clinical findings come into prominence<sup>2</sup>. The typical radiologic image is a radiolucent nidus <2 cm in size surrounded by a sclerosed area. Nevertheless, the typical signs that are expected to be observed on direct radiography cannot be determined in >25% of cases with hand-wrist osteoid osteomas<sup>3</sup>.

CRPS I is commonly observed in the hands and main symptom is pain. Local diffuse or spotty osteoporosis may be observed in approximately 63% of the cases and, NSAIDs have an important place in the treatment<sup>4</sup>. Due to these similarities, the present case might be confused with CRPS I during the previous examinations. The three-phase bone scintigraphy was also reported as a probable CRPS I in our case. In addition, on the MRI of the area, which was interpreted as a sclerotic area on the radiography performed at our hospital, there was a lesion in the scaphoid bone in the neighborhood of the joint, a nidus was clearly recognized, and edema, synovitis, and an effusion in the peripheral tissues was observed. Therefore, it is such a condition that inflammatory symptoms would be expected. Since osteoid osteomas do not come to mind during a clinical examination, and the lesion cannot always be defined on radiography, the lesion might easily be considered as an inflammatory arthritis.

In the case of local involvement with a clinical course consisting of pain and swelling, and characterized by inflammation or resistance to medical therapy or frequent recurrence in the extremi-

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**Figure 1.**

ties, a diagnosis of osteoid osteoma should be considered, and further analyses and investigations should be performed for specific diagnosis.

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