Ultrasonography: A Useful Tool for the Diagnosis of Chondrocalcinosis of the Sternoclavicular Joint

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The sternoclavicular joint is an uncommon location for chondrocalcinosis (calcium pyrophosphate deposition disease).

A 66-year-old man, known for chondrocalcinosis in the ankle, was hospitalized in the Hematology Department on the suspicion of myelodysplasia. A bone marrow examination was performed, and 48 h later, anterior chest wall pain appeared with an inflammatory syndrome (C-reactive protein 60 mg/l) without fever. Clinical examination revealed a pain localized in the right sternoclavicular joint with local inflammatory appearance. Ultrasound (US) examination was immediately performed and highlighted synovitis of the sternoclavicular joint and the presence of dense deposits without Doppler activity, suggesting chondrocalcinosis (Figure 1A). No arthrocentesis was performed because of the tissue appearance in US. Treatment with colchicine was immediately started and enabled the resolution of the symptoms and of the inflammatory syndrome in 48 h. After

24 h, a computed tomography (CT) scan was performed and confirmed the presence of synovitis with erosions and some deposits of microcrystals, suggesting a diagnosis of chondrocalcinosis (Figure 1B). The main differential diagnosis was infection, which required biopsy, but the clinical course and the absence of fever and Doppler activity (possible in chondrocalcinosis) rejected this hypothesis. SAPHO (synovitis, acne, pustulosis, hyperostosis, and osteitis) syndrome, gout, or osteoarthritis could have been discussed, but they seemed unlikely in the clinical context.

Sternoclavicular joint is an uncommon location for chondrocalcinosis. This lesion has been previously described using CT scans¹ and some authors have reported a prevalence nearing 17% in the elderly population². US examination could be a useful tool to rapidly consider the diagnosis of chondrocalcinosis in case of inflammatory pain in the anterior chest wall.

Figure 1. (A) Ultrasonography and (B) computed tomography scan examination of the sternoclavicular joint in longitudinal section highlighting a synovitis with calcic deposits, suggesting a diagnosis of chondrocalcinosis.

REFERENCES

1. De Marco G, Rampini C, Ferri E, Sinigaglia L. A rare case of chondrocalcinosis in the left sterno-clavicular joint. *Rheumatology* 2011;50:2317-8.
2. Shirazian H, Chang EY, Wolfson T, Gamst AC, Chung CB, Resnick DL. Prevalence of sternoclavicular joint calcium pyrophosphate dihydrate crystal deposition on computed tomography. *Clin Imaging* 2014;38:380-3.