

Bilateral subacromial-subdeltoid bursitis in elderly patients: a diagnostic challenge

Sirs,

We read with interest the published paper by Ottaviani *et al.* (1) defining the prevalence of calcium pyrophosphate deposition disease (CPPDD) among patients with polymyalgic syndrome with suspected polymyalgia rheumatica (PMR), according to the recent ACR/EULAR criteria.

Clinical presentation of CPPD may present similarities with polymyalgia rheumatica (2). Exclusion of other disorders that mimic the PMR is mandatory before making the diagnosis of PMR (3). Nevertheless, the differentiation between CPPDD and PMR can be difficult. Indeed, in a study including 118 patients with PMR established according to the Chuang and Healey criteria and 112 patients diagnosed with CPPD fulfilling the modified criteria of McCarty, 36 patients fulfilled the diagnostic criteria of both diseases (2).

The EULAR/ACR classification criteria for PMR are based on clinical, biological, and ultrasound (US) criteria. Using US criteria, a score higher than 5 had a sensitivity and a specificity of 66% and 81%, respectively (4). In their manuscript, Ottaviani *et al.* (1) noted that the diagnosis of CPPD was made in 25 from 52 patients fulfilling ACR/EULAR criteria for PMR. Clinical presentations of CPPDD include asymptomatic CPPD, osteoarthritis CPPD, acute CPP crystal arthritis, and chronic CPP crystal inflammatory arthritis. Atypical manifestations had been reported such as bursitis, tenosynovitis, tendinitis, etc. (5). The diagnosis is very challenging in elderly patients with bilateral painful shoulder associated with morning stiffness due to bilateral subacromial-subdeltoid bursitis without synovitis nor other joints involvement, associated with increased inflammatory biomarkers [C-reactive protein (CRP) level or erythrocyte sedimentation rate (ESR)].

PMR and CPPDD share common clinical, biological and US features including bilateral shoulder aching, abnormal CRP and ESR, and subacromial-subdeltoid bursitis. In their study, Ottaviani *et al.* noted subacromial-subdeltoid bursitis in 96.3% and 68% of patients with PMR and CPPDD, respectively (1).

However, the authors did not specify the US characteristics of subacromial-subdeltoid bursitis.

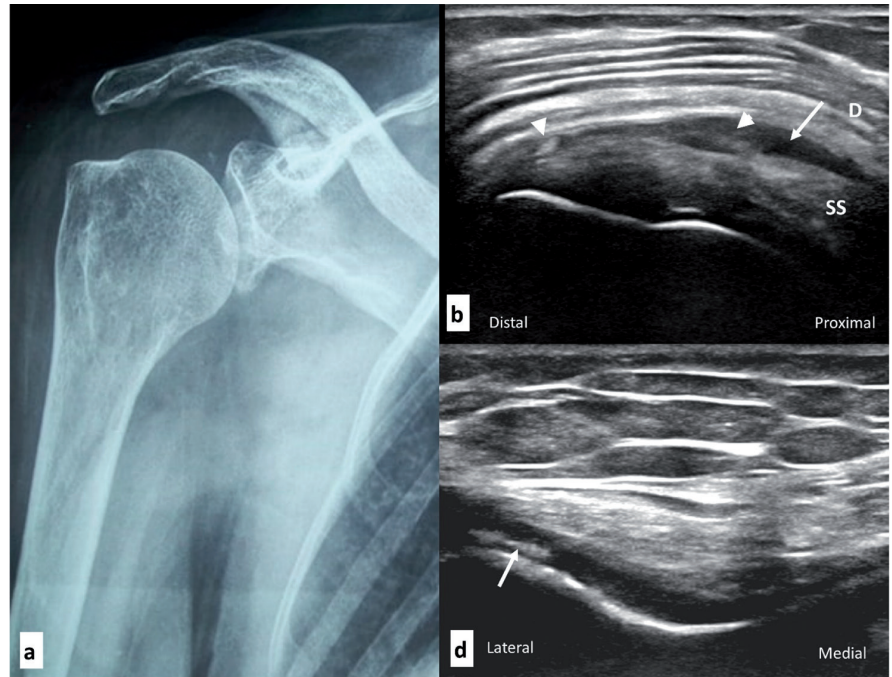


Fig. 1. Shoulder radiograph of a 73-year-old woman, with a two-week history of a bilateral painful shoulder with morning stiffness lasting 90 min, without abnormalities. (a) Ultrasound examination of the right shoulder (b) showing subacromial-subdeltoid bursitis measuring 0.3 cm (white arrow) with the existence of hyperechoic nodules within bursitis (arrowhead); (d) deltoid, SS: supraspinatus. Ultrasound examination of the right knee (c) revealing hyperechogenicity of femoral hyaline cartilage (white arrow).

Likewise, US characteristics of subacromial-subdeltoid bursitis were not specified in the EULAR/ACR classification criteria for PMR.

According to OMERACT, bursitis is defined as an enlargement, with well-defined, anechoic or hypoechoic area inside, with or without Doppler signal (6). Bursitis related to CPPDD is characterized by the existence of homogeneous hyperechoic nodular or oval deposits within the bursa (7) (Fig. 1).

Ottaviani *et al.* suggest that the ultrasound assessment acromioclavicular joint can be helpful to make the diagnosis of CPPDD in patients with polymyalgic syndrome (1). This finding is important. Nevertheless, the knee fibrocartilage and hyaline cartilage, as well as triangular fibrocartilage of the wrist, are the most involved sites in CPPDD. Moreover, the sensibility and specificity of the US to demonstrate cartilage calcification in the knee are 87% and 96% [8]. Besides, hyaline cartilage and fibrocartilage of the knee yielded a good reliability (9). However, the kappa value of the inter-reader agreement was moderate for the acromioclavicular joint (10).

Therefore, we believe that knee US is more useful in patients with polymyalgic syndrome. The existence of thin hyperechoic bands in the hyaline cartilage or hyperechoic spots in fibrocartilage of the

knee is helpful to make the diagnosis of CPPDD (9).

It is important to differentiate PMR from CPPDD since the management of these two disorders is different. In elderly patients with bilateral painful shoulder associated with morning stiffness and increased inflammatory biomarkers, the diagnosis of CPPDD should be considered when the shoulder US shows hyperechoic nodules within subacromial-subdeltoid bursitis. The assessment of hyaline cartilage and fibrocartilage of the knee increases the diagnostic accuracy of CPPDD. Other studies comparing the diagnosis contribution of Knee US and acromioclavicular joint US in patients with polymyalgic syndrome are necessary.

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