

Intense 18F-fluorodeoxyglucose Uptake in Systemic Sclerosis with Diffuse Calcinosis

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Systemic sclerosis (SSc) is an autoimmune disease and calcinosis occurs in 25% of cases, usually in patients with limited forms¹. Calcifications may result from chronic inflammation, structural damage, hypovascularity and hypoxia, age-related tissue changes, and genetic predispositions².

A 67-year-old woman with limited SSc complains of shoulder pain without dyspnea. Computed tomography (CT) scan showed multiple calcifications around joints (shoulder, elbow, and right knee) and in paravertebral space. There was an evidence of interstitial lung disease predominant at lower lobes with septal thickening, bronchiectasis, and ground glass opacities. Pulmonary functional tests were normal. 18F-fluorodeoxyglucose positron emission tomography (FDG-PET) showed multiple intense FDG uptakes in all

calcinosis locations (SUVmax = 5.7; Figure 1A and Figure 1B). Mild pulmonary FDG uptake at lower lobes was also observed regarding an interstitial infiltration (SUVmax = 2.8; Figure 1C). Patient was discharged without any immunosuppressive medication with regular followup of CT and functional pulmonary tests.

To our knowledge, ours is the first case report showing FDG uptake in diffuse calcinosis of SSc and suggesting a role for FDG-PET in assessing inflammatory activity of calcinosis. This use of FDG-PET has already been described in acute inflammatory disorders, especially in sarcoidosis^{3,4}, or more recently in nonspecific interstitial pneumonia, a frequent complication of SSc⁵. Further studies are needed to analyze the potential use of FDG-PET/CT in the management of SSc.

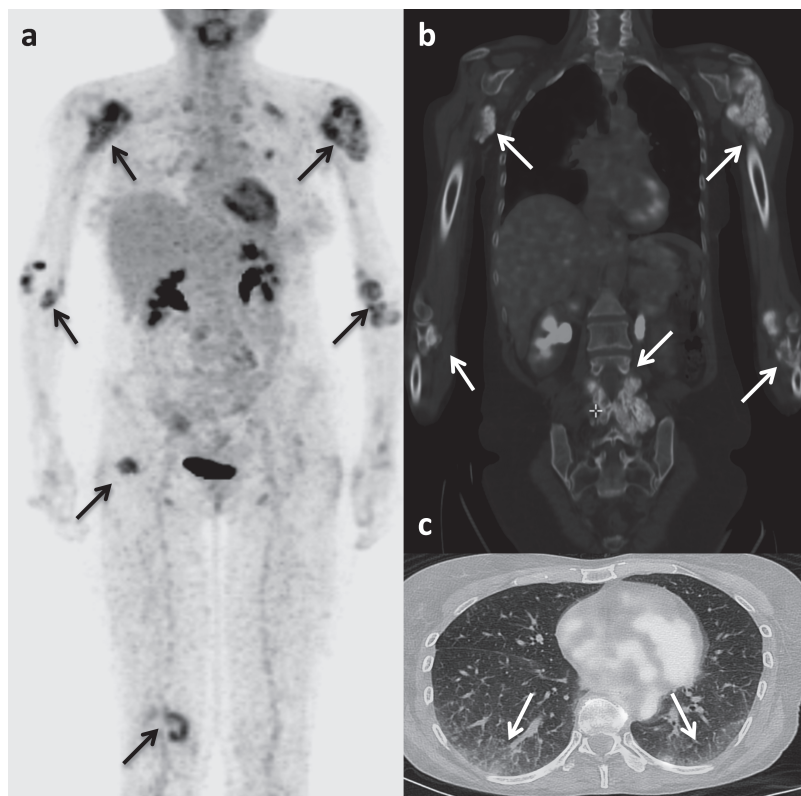


Figure 1. (A) Maximum intensity projection shows multiple FDG uptakes around joints (arrows: shoulder, elbow, hip, and right knee). Positron emission tomography/computed tomography fusion shows intense FDG uptakes (SUVmax = 5.7) in calcinosis locations (B: arrows) and mild interstitial lung disease predominant at lower lobes (SUVmax = 2.8) with septal thickening, bronchiectasis, and ground glass opacities (C: arrows). FDG: 18F-fluorodeoxyglucose.

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