The question mark sign of large vessel vasculitis on 18F-FDG PET/CT

A 77-year-old woman with a non-specific history of malaise and raised inflammatory markers was referred to gastroenterology. There were no specific findings on history or physical examination but a markedly elevated C-reactive protein (CRP) of 140 mg/l was confirmed and the patient was referred for whole body 18F-FDG PET/CT. This demonstrated significantly increased FDG uptake in the aortic wall (Figure 1A, sagittal PET, SUVmax = 6.7) which extended into the carotid, brachiocephalic, axillary (Figure 1B, coronal fused PET/CT), iliac and femoral arteries but spared the abdominal branches. The pattern of FDG uptake produced a striking question mark appearance of the aorta on sagittal images.

18F-FDG PET/CT is rapidly becoming established as the imaging method of choice to detect active large vessel arteritis, its extent and response to therapy. These patients are often a diagnostic conundrum presenting with ill-defined symptoms such as fever, anorexia, weight loss or malaise and may be investigated to exclude an underlying malignancy.

This patient’s CRP and general well-being made a good response to steroid administration.

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Reference