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IMAGE OF THE MONTH

Vasculitis and bursitis on [^{18}F]FDG-PET/CT following COVID-19 mRNA vaccine: post hoc ergo propter hoc?

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Even though SARS-CoV-2 infection is linked with large vessel vasculitis (LVV) [1–3], there are no reports of LVV after SARS-CoV-2 mRNA vaccination.

Here, we describe the case of a 78-year-old female who underwent [^{18}F]FDG positron emission tomography/computed tomography ([^{18}F]FDG-PET/CT) due to symptoms following COVID-19 vaccination that raised suspicion for LVV.

The patient presented with complaints of cephalgia, cervicalgia, ostealgia, and pain in multiple large joints and muscles that started 2–3 weeks after the first shot of the Moderna COVID-19 vaccine (mRNA-1273) — which usually may cause mild side effects [4] — and worsened after the second shot. She never experienced anything alike before and denied any recent infection or new medication. Blood tests showed elevated erythrocyte sedimentation rate and C-reactive protein.

[^{18}F]FDG-PET/CT demonstrated increased tracer uptakes in the large arteries of the legs (blue arrows in a). Additionally, we noted moderate enhancement within pelvic bursae (green arrows in a and b), along with intense FDG uptakes of the ligamenta flava (red arrows in b) and thoracolumbal interspinous bursae (blue arrows in b). There was significant enhancement in the V3 segment of the vertebral arteries (blue arrows in c), which correlated with arterial wall thickening on ceCT (blue arrows in d).

To recapitulate, this is the first case to illustrate rare vascular and bursal findings after COVID-19 mRNA vaccination. However, we still must be cautious about linking vaccine side effects to those findings, since they could be coincidental (e.g., prior unknown and asymptomatic polymyalgia rheumatica [5, 6]) rather than causal.

This article is part of the Topical Collection on Infection and inflammation.

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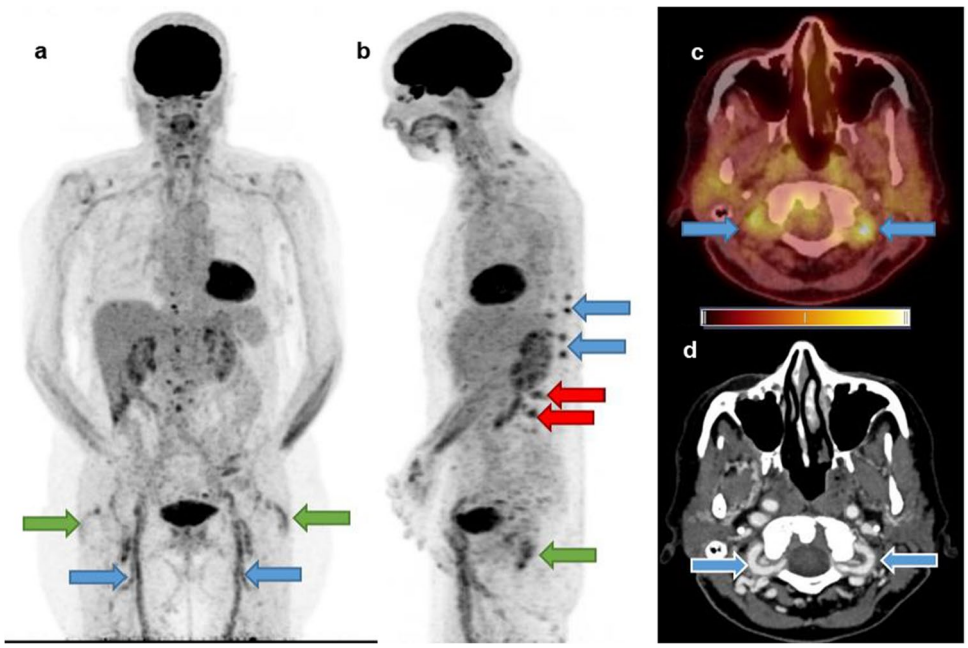

Declarations

Ethics approval The submitted work does not contain any studies with human participants performed by any of the authors.

Informed consent Informed consent was obtained from the individual patient for the data and images included in this work.

Conflict of interest The authors declare no competing interests.

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