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IMAGE OF THE MONTH

FDG PET/CT evaluation of a patient recovering from COVID-19

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A 48-year-old woman presented with 10-day history of cough and fever (up to 39.1 °C). Nasopharyngeal swab specimen was positive for COVID-19 nucleic acid test (RT-PCR). Detailed time course of the clinical data, laboratory tests, and imaging findings of computed tomography (CT) and [^{18}F] fluorodeoxyglucose ([^{18}F] FDG) positron emission tomography (PET/CT) are described in the figure. Chest CT obtained from day 7 to day 15 of the hospitalization showed GGOs (ground glass opacities) with crazy-paving pattern to consolidative opacities. Following antiviral (hydroxychloroquine hydrochloride and interferon) and anti-inflammatory (budesonide and albumin) treatment for several days, the patient was effectively relieved from clinical symptoms and was negative in two subsequent RT-PCR tests (day 13, day 14). [^{18}F] FDG PET/CT scan (day 16) was performed to evaluate any other active disease process. It showed multiple FDG-positive consolidative opacities in both lungs (PET, fusion; SUV_{max} ranged 2.7–5.9) and multiple FDG-avid lymph nodes in the left subclavian, mediastinum, and hilum regions (arrows, fusion; SUV_{max} ranged 2.9–6.5) A follow-up chest CT acquired 2-month post-discharge (day 77) revealed few GGOs. RT-PCR was again negative. FDG-positive consolidative opacities in both lungs imply persistent inflammatory burden, while the patient was recovering and negative in RT-PCR. FDG-avid lymph nodes also suggest lingering lymphadenitis [1, 2]. FDG uptake may vary with different stages of virus and disease [3]. FDG PET/CT with its capability of directly mapping the location and activity of inflammation during virus exposure may have a role to play when there is uncertainty of diagnosis, for clinical management and for monitoring the effect of treatment [4].

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

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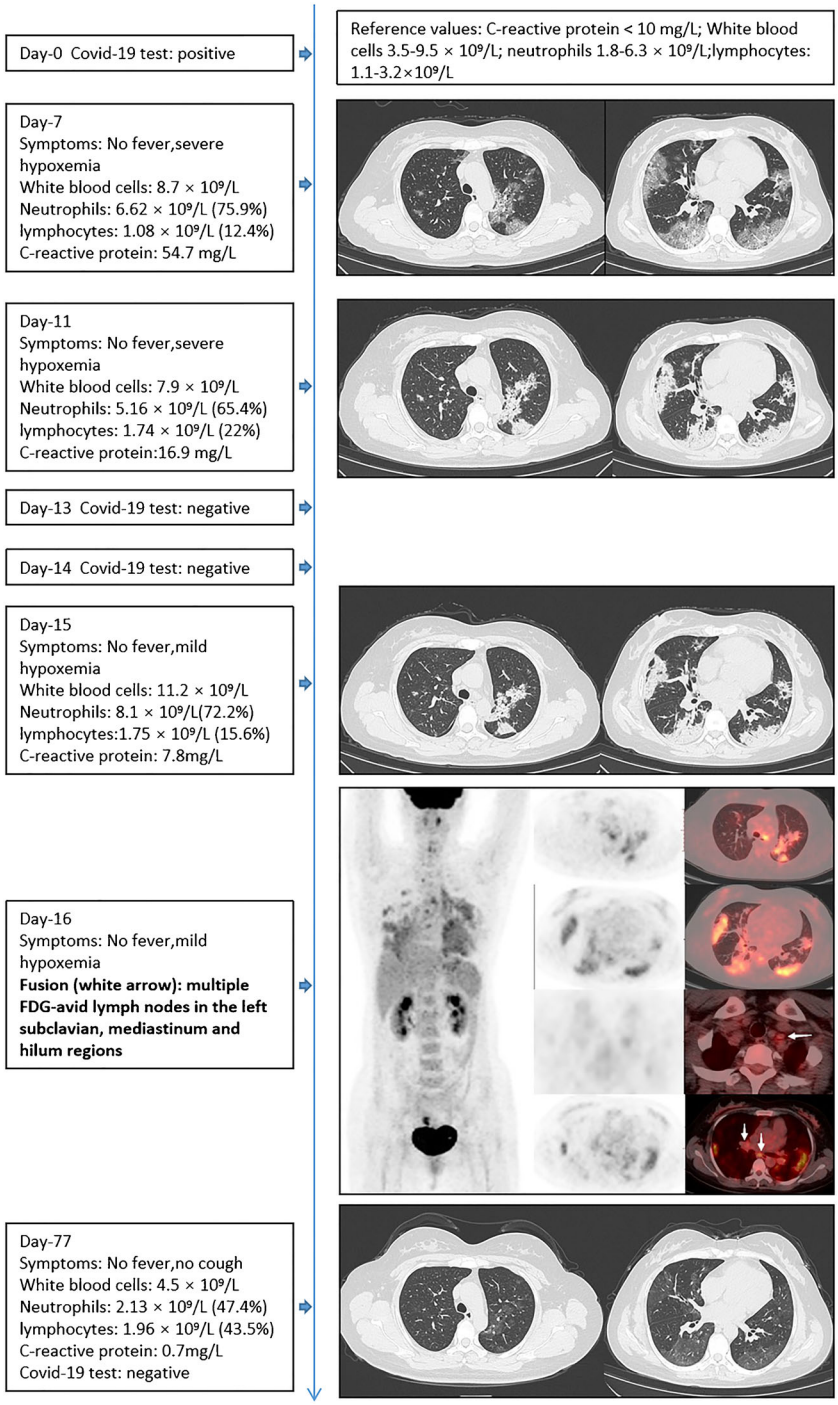

CT and 18F-FDG PET/CT images and the time course of clinical and laboratory data from a 48-year-old woman recovering from COVID-19

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Informed consent Informed consent was obtained from the patient for publication of this case study/report and accompanying images.

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