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[PICTURES IN CLINICAL MEDICINE]

Late-onset COVID-19-induced Hemophagocytic Syndrome

Eisuke Kanematsu^{1,2}, Takahiro Nunokawa¹, Naofumi Chinen¹ and Akio Komatsu³

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Picture 1.



Picture 2.

A 62-year-old man with diabetes mellitus presented with a 7-day history of a fever. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection was diagnosed based on a positive sputum polymerase chain reaction result and the presence of pulmonary infiltrates. His pneumonia improved with dexamethasone and favipiravir. However, on day 17 of hospitalization, the fever recurred with leukopenia, thrombocytopenia, natural killer cell dysfunction, and elevated levels of ferritin, lactate dehydrogenase, and soluble interleukin-2 receptor- α . His bone marrow showed phagocytosis (arrows) (Picture 1, May-Grunwald Giemsa, original magnification ×400) and macrophage infiltration (Picture 2, immunohistochemical staining for CD68, original magnification x400). Hemophagocytic syndrome (HPS) was diagnosed, and he received methylprednisolone 80 mg/day. His fever subsided again, and the laboratory findings improved. SARS-CoV-2 infection-associated HPS co-occurring with organ manifestations has been reported (1, 2). Clinicians should be aware of the possibility of HPS even after other symptoms resolve, as in the present case.

The authors state that they have no Conflict of Interest (COI).

References

- 1. Webb BJ, Peltan ID, Jensen P, et al. Clinical criteria for COVID-19-associated hyperinflammatory syndrome: a cohort study. Lancet Rheumatol 2: e754-e763, 2020.
- Prilutskiy A, Kritselis M, Shevtsov A, et al. SARS-CoV-2 Infection-associated hemophagocytic lymphohistiocytosis: an autopsy series with clinical and laboratory correlation. Am J Clin Pathol 154: 466-474, 2020.

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¹Department of Internal Medicine, Tama Nambu Chiiki Hospital, Japan, ²Department of Rheumatic Diseases, Tokyo Metropolitan Tama Medical Center, Japan and ³Department of Pathology, Tama Nambu Chiiki Hospital, Japan

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