

Massive Platelet Clumping on Peripheral Blood Smear and Pseudothrombocytopenia in a Patient with COVID-19

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Pseudothrombocytopenia is often associated with ethylenediaminetetraacetic acid (EDTA) used in blood count tubes. It is essential to examine the peripheral smear of patients with thrombocytopenia and differentiate actual thrombocytopenia from pseudothrombocytopenia.^{1,2} COVID-19 is a new infectious agent for which immunological returns have not been clearly defined, and pseudothrombocytopenia has been reported as in COVID patients and has been associated with the binding of platelets due to typical EDTA.^{3,4} We think that it should be kept in mind that pseudothrombocytopenia in COVID-19 patients can be an effect of the changes in the endothelium as a result of the infection. Written informed consent was obtained from the patient.

A 67-year-old man was admitted to emergency service with cough, shortness of breath, lethargia, and fatigue. He had no medications. He was diagnosed with cyanotic and auscultation of the thorax showing coarse rales. Computer tomography image of the thorax showed bilateral multilobar peripherally located ground glass opacities which were characteristic of COVID-19, and the polymerase chain reaction test for COVID-19 was positive. Laboratory test results showed a normal platelet count of $179 \times 10^9/L$. Favipiravir was started immediately with enoxaparin sodium as the D-dimer level was 960 ng/dL. On the third day of the admission, platelet count suddenly dropped to $22 \times 10^9/L$. On peripheral smear examination, giant platelet clumping was seen (Figure 1). Platelet count was $60 \times 10^9/L$ in a citrate tube. Favipiravir was stopped after 5 days, but pseudothrombocytopenia continued with a deep level of $5 \times 10^9/L$ thrombocytes at the counter. He was discharged after 34 days with complications of concomitant bacterial pneumonia and decubitus ulcers. The platelet number was $50 \times 10^9/L$ at the counter at that time.

Patient Consent for Publication: Written informed consent was obtained from the patient.

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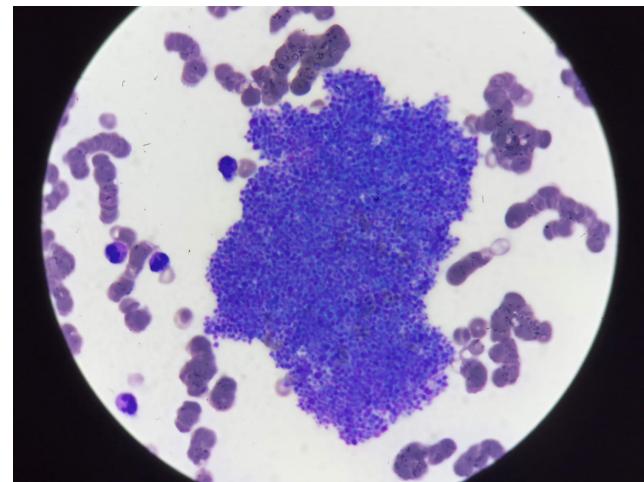


FIG. 1. Pseudothrombocytopenia with massive platelet clumping in a patient with COVID 19.

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