A 16-year-old girl with a history of contact with another person with Coronavirus disease-2019 (COVID-19), presented with cough, dyspnea, and anosmia. The SARS-CoV-2 real-time polymerase chain reaction test was positive. On her physical examination, bilateral medium-coarse rales were noticed. The laboratory workup revealed hemoglobin was 16 g/dL, white blood cell was 5.1x10⁹/L, platelet count was 158x10⁹/L, and serum C-reactive protein was 1.2 mg/L. B12 and folic acid tests were not examined because she was evaluated in the emergency department. Peripheral smear showed many giant platelets, vacuolated monocytes, dysplastic neutrophils. We also observed similar dysplastic changes in other children with COVID-19 (Figure 1; May-Grunewald-Giemsa stain; 100×).

Dysplastic morphology of blood cells can be noted both in myelodysplastic syndrome and also in many nonclonal diseases such as infections, autoimmune disorders, nutritional deficiencies, drugs, or toxins (1). Prominent morphological abnormalities of the neutrophils and platelets are reported in adult patients with COVID-19 (2, 3). In patients with COVID-19 infection, the upregulation of proinflammatory cytokines was reported (4). Inhibitory effects of cytokines from virus-infected cells on hematopoiesis may also be responsible for myelodysplastic changes (1).

Conflicts of interest and source of funding: None declared
References


Figure 1. Dysplastic changes in peripheral blood (May-Grunewald-Giemsa stain; 100×), A: A reactive lymphocyte and pseudo Pelger-Huet anomaly of the neutrophil. B: Pseudo Pelger-Huet anomaly of neutrophils. C: Lobulation anomaly of the neutrophils, D: A giant platelet