



Coagulation Abnormalities Due to COVID-19 in a Child with Thalassemia

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To the Editor: Novel coronavirus infection in Indonesia reached 140,000 cases by 17th August 2020. There was inadequate data that supported the involvement of coagulation problems in pediatric cases, especially those with transfusion-dependent-thalassemia.

We presented 4 pediatric cases of COVID-19 (positive oropharyngeal swab) and nonsplenectomized transfusion-dependent-thalassemia (beta-thalassemia), which came for blood transfusion visit. Three patients were male and 1 patient was female. The age ranged from 9 y 8-mo-old to 17-y-old. All of our patients were mildly ill; mild respiratory symptoms were reported only in 2 cases; however, three patients showed lung infiltrate in the radiologic examination. None of them presented lymphopenia, thrombocytopenia, elevated CRP, elevated Troponin-T, or bleeding manifestation. The mean hemoglobin level was 6.7 g/dL. Elevated D-dimer was detected in 1 patient. Three thalassemic patients had prolongation of APTT or PT. None of our patients developed clinical thrombosis. The mean ferritin level (2524.42 ng/mL) has been

increased from the previous month (980.51–3672.63 ng/mL). Supportive and therapeutic care such as blood transfusion, antibiotics, antiviral were given. Oral iron chelator has still been given. Fibrinogen level, liver biopsy, and MRI T2* were not performed because of limitations.

Elevated D-dimer and PT prolongation have been reported in adult COVID-19, which might be related to worsening disease processes and poor prognosis [1, 2]. Excessive activation of coagulation cascade will lead to D-dimer elevation and imbalance between procoagulant and anticoagulant homeostatic mechanisms [3]. Coagulation problems in adult thalassemia patients with COVID-19 suggested that it might not be more severe than the general population [4]. Appropriate to the previous study, our patients with thalassemia also showed less severity than the general population, which might suggest partial coagulation problems. The beta-thalassemia population should not have the same risk of COVID-19 as other patients, considering its reduced severity [5]. No recommendation for mildly ill patients to get prophylactic low molecular weight heparin. Dysregulation of the coagulation cascade is prominent findings in SARS-Cov-2 infection associated with transfusion-dependent-thalassemia. A larger sample is required to better understand the impact of coagulation abnormalities due to COVID-19 in beta-thalassemia children.

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Compliance with Ethical Standards

Conflict of Interest None.

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