665. Hematologic and Biochemical Changes in Hospitalized Patients With Middle East Respiratory Syndrome-Coronavirus

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Background. There is no horizontal data on the changes of hematologic and biochemical findings in patients with Middle East respiratory syndrome coronavirus (MERS-CoV) infection.

Methods. This is a retrospective cohort study (N = 17) to describe the hematological and biochemical findings of patients with MERS. All patients tested positive for MERS-COV using RT-PCR. The definition of leukopenia was a leukocyte count $<4.0 \times 10^9$ cells/L, lymphopenia as a lymphocyte count $<1.5 \times 10^9$ cells/L, thrombocytopenia as a platelet count $<140 \times 10^9$ cells/L, aspartate aminotransferase and alanine aminotransferase elevations as having levels twice the upper reference limit (34 U/L and 55 U/L, respectively). Elevated lactate dehydrogenase (LDH) was considered as LDH level >2 times the upper normal level of 280 U/L. Day one is the first day of admission and subsequent days after admission are based on this calculation. Laboratory data were collected for 21 days after admission.

Results. The baseline mean serum creatinine was 4.1 (+4.2) mg/dl indicating pre-existence of renal impairment in the included patients. The mean + SD of alkaline phosphatase was 101 + 34.3; aspartate aminotransferase 43.1 + 25.9; and lactate dehydrogenase 847.7 + 462.4. There was an increase in these tests in day 21 due to a single patient who developed shock liver resulting in the elevation of hepatic enzymes. During the 21 days of observation, there was significant increase in the WBC count from 8.3 + 4.6 to 14.53 + 7 (P = 0.001), and an increase in absolute neutrophil count from 6.33 + 4.2 to 12 + 5.5 (P = 0.015). Transient leucopenia (leucocyte count $<4 \times 10^9$/L) was found in few patients; however, the mean WBC count was within the normal range. The absolute lymphocyte count showed no significant changes over time.

Conclusion. Patients with MERS-CoV infection did not show significant changes over time in the studied parameters apart from the development of leukocytosis and neutrophilia.

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