

BOLETIM RAMB COVID-19

Número 2
20 de abril de 2020

Hematological changes in Covid-19 infections

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Em um momento em que há uma emergência mundial de saúde pública, é fundamental que o conhecimento científico gerado durante a pandemia chegue rapidamente à classe médica classe médica.

Dentro desta dinâmica a Revista da Associação Médica Brasileira (Ramb) está adotando uma série de medidas a fim de acelerar o processo editorial para publicação de artigos sobre a Covid-19. A partir de hoje (14/04/2020), a AMB publicará o Boletim Ramb Covid-19, que antecipará os artigos científicos selecionados pelos editores da Ramb sobre o tema.

“Os artigos foram escritos por especialistas e selecionados dentro dos critérios da Ramb para esclarecer temas fisiopatológicos, assim como oferecer orientações de prevenção e tratamento da doença. Dessa forma, esperamos colaborar com os médicos para o melhor atendimento aos seus pacientes, com a disponibilidade mais ágil desses artigos, antes de sua publicação na Ramb”, comenta Carlos Serrano Jr., editor-chefe da Ramb.

Para o diretor científico da AMB, Antonio Carlos Palandri Chagas, “neste momento ímpar vivido no mundo por conta da pandemia de Covid-19, a AMB cumpre seu papel de estar levando à comunidade científica brasileira os recentes artigos sobre os mecanismos fisiopatológicos e aspectos clínicos relevantes dessa situação que assola a saúde pública”.



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The RAMB, Journal of The Brazilian Medical Association, is an official publication of the Associação Médica Brasileira (AMB – Brazilian Medical Association), indexed in Medline, Science Citation Index Expanded, Journal Citation Reports, Index Copernicus, Lilacs, and Qualis B2 Capes databases, and licensed by Creative Commons®. Registered in the 1st Office of Registration of Deeds and Documents of São Paulo under n. 1.083, Book B, n. 2.

Publication norms are available on the website www.ramb.org.br

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Hematological changes in Covid-19 infections

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The infection by COVID-19 (SARS-CoV-2) has been taking on proportions of pandemic characteristics. Preventive infection measures for this virus, as well as epidemiological, pathophysiological, diagnosis, and treatment knowledge in relation to it are extremely needed. The advances in diagnostic tests, whether in the detection of the antibody through “fast” tests, or in tests to identify the presence of the virus (using the technique of RT-PCR of respiratory samples from affected patients) are very important, as they help both in epidemiology, for case tracking and containment of outbreaks, as in the earlier diagnosis of the disease, leading to a favorable outcome, especially in severe cases. In this context, we are concerned about determining biomarkers that could be used in screening for diagnosis, as well as in monitoring the evolution of COVID-19 infections.

The complete blood count is the test used to approach infections that are very prevalent in Brasil, with emphasis on arboviruses, especially Dengue. The exam assesses hematopoietic lineage from a quantitative and qualitative viewpoint. In the Chinese population, studies have reported the presence of leukopenia on hospital

admission, basically at the expense of moderate to severe lymphopenia and mild thrombocytopenia². The review of studies that contained analyses of peripheral blood samples showed that a greater number of lymphopenic patients had the presence of reactive lymphocytes, of which a subset appeared to be lymphoplasmacytoid². Thus, the monitoring of these hematological parameters is essential and can assist in the identification of patients who will need care in the Intensive care unit, as they presented a deeper lymphopenia, as well as a decrease in hemoglobin, absolute monocyte count and even tend to develop neutrophilia during hospitalization, with a peak in this period of ICU stay [FAN et al., 2020]. The presence of atypical or activated lymphocytes is not significant for the degree of infection, the main comorbidity of which is Acute Respiratory Distress Syndrome (ARDS). This contrasts with what is observed in severe dengue during the admission of patients from a referral hospital of Fortaleza, Brasil, and this parameter can have a screening function as a modulator of the evolution of the viral process in arboviruses¹. The non-alteration of the erythroid lineage, such as hemo-

concentration and a slight numerical alteration of platelets, when present, also contrasts with severe dengue¹. Lymphopenia, which has also been documented in chikungunya³, in covid-19, seems to be the most relevant peripheral hematopoietic alteration, its use being suggested as a severity biomarker of the infection. In this context, studies related to the evaluation of biomarkers of hematological parameters that can be used as screening for exam diagnosis, as well as monitoring the evolution of severe cases, when necessary. ■

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Submitted Date: 27/03/2020

Accepted Date: 28/03/2020

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