conferenceseries.com

3rd European Congress on **HEMATOLOGY**

July 11, 2022 | Webinar

Hematologic impact and complications of COVID-19

Laila M. Noya

Private Office – Freelance, Spain

SARS-CoV-2 (COVID-19) infection should be defined as a multisystem disease associated with multiple cellular and biochemical abnormalities: in critically ill patients it causes disseminated intravascular coagulation via endothelial damage, neutrophil activation, but there is also consensus that COVID-19 associated coagulopathy is more analogous to thrombotic microangiopathy and complement activation leading to endothelial damage. Activated endothelial cells release chemoattractants leading to the recruitment of monocytes, which differentiate into pro-inflammatory macrophages. Activated natural killer cells and cytotoxic T lymphocytes further promote recruitment and activation of monocyte-derived macrophages through the production of granulocyte-macrophage colony- stimulating factor and tumor necrosis factor. Lymphocytes express ACE-2 receptors and type 1 interferon may induce expression of SARS-CoV-2 entry receptors on macrophages as well. These activated monocyte-derived macrophages produce the characteristic COVID-19 cytokine storm. This surge in inflammatory cytokines predisposes to thrombosis in both microvascular and macrovascular thrombotic complications: pulmonary embolism, deep venous thrombosis, and arterial thrombotic complications in both microvascular and macrovascular thrombotic lymphohistiocytosis: hemophagocytic syndrome. There are reports of thrombotic complications in the presence of antiphospholipid antibodies, whose clinical significance is unknown. The prevalence of thrombocytopenia was reported in wide range. Moreover, thrombocytopenia induced by drugs such as heparin should be considered. A study reported the presence of the anti- heparin-PF4 antibody in most critically ill COVID-19 patients; it is possible that these findings may simply be due to immune dysregulation in this highly immunogenic disease and not a true heparin-induced thrombocytopenia. At the same time, thrombocytosis was also recorded in moderately severe cases.

Biography

Laila Noya completed her career as MD at the National University of La Plata, Argentina; Specialiced at Hematology by National University of Buenos Aires, Argentina. Member of Argentine Group of Hemostasia and Thrombosis; member of Sub comision of Hemostasia and Thrombosis of Argentine Society of Hematology