

Macopharma Press Release

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Effectiveness of Methylene Blue-treated convalescent plasma therapy in severe COVID-19 patients in China

COVID-19, the disease caused by Coronavirus SARS-CoV-2, is currently a big threat to global health. As per today, there is not any specific antiviral agent available to treat this infection.

Convalescent plasma (CP) therapy, passive immunotherapy, has been applied to the prevention and treatment of many infectious diseases for more than one century. Over the past two decades, CP therapy was successfully used in the treatment of SARS, MERS, and 2009 H1N1 pandemic, with satisfactory efficacy and safety.

Macopharma is pleased to share with you the publication of a clinical study on Methylene Blue-treated convalescent plasma transfusion, funded by the Ministry of Science and Technology in China and recently published in PNAS (Proceedings of the National Academy of Sciences of the United States of America), a reputed journal in the US¹.

Ten severe patients were enrolled in this prospective trial, following the WHO Blood Transfusion Protocol, and the transfusion had a clearly positive impact on them.

« The primary endpoint was the safety of CP transfusion. The secondary endpoints were the improvement of clinical symptoms and laboratory parameters, within 3 days after CP transfusion. »

A neutralizing assay aiming to compare the serum neutralizing antibody titers and SARS-CoV-2 RNA load, before and after CP therapy, was also implemented.

Methylene blue photochemistry was applied in this study to inactivate the potential residual viruses and maintain the activity of neutralizing antibodies at the highest possible level. « The viral load was undetectable after transfusion in seven patients who had a previous viremia. »

This study showed CP therapy, prepared from recovered donors and virally inactivated with Methylene Blue technique, was well tolerated and could potentially improve the clinical outcomes, through neutralizing viremia, in severe COVID-19 patients.

We, as Macopharma, are supporting any blood organisation, hospital, institution or authority to secure the plasma supply providing our THERAFLEX MB-Plasma procedure, a plasma inactivation technology that was developed in partnership with the German Red Cross NSTOB Springe.

Additionally, we are very grateful to donors from around the world who have come forward voluntarily to donate their plasma to help alleviate patients seriously affected by COVID-19.

1. Duan K, Liu B, Li C, Zhang H, Yu T, Qu J, Zhou M, Chen L, Meng S, Hu Y, Peng C, Yuan M, Huang J, Wang Z, Yu J, Gao X, Wang D, Yu X, Li L, Zhang J, Wu X, Li B, Xu Y, Chen W, Peng Y, Hu Y, Lin L, Liu X, Huang S, Zhou Z, Zhang L, Wang Y, Zhang Z, Deng K, Xia Z, Gong Q, Zhang W, Zheng X, Liu Y, Yang H, Zhou D, Yu D, Hou J, Shi Z, Chen S, Chen Z, Zhang X, Yang X. Effectiveness of convalescent plasma therapy in severe COVID-19 patients. Proc Natl Acad Sci U S A 2020: 202004168.