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Early high antibody titre convalescent plasma for hospitalised COVID-19 patients: DAWn-plasma

Timothy Devos[1], Quentin Van Thillo[2], Veerle Compernolle[3,4], Tomé Najdovski[5], Marta Romano[6], Nicolas Dauby[7], Laurent Jadot[8], Mathias Leys[9], Evelyne Maillart[10], Sarah Loof[11,12], Lucie Seyler[13], Martial Moonen[14], Michel Moutschen[15], Niels Van Regenmortel[16], Kevin K. Ariën[17], Cyril Barbezange[18], Albrecht Betrains[19], Mutien Garigliany[20], Matthias M. Engelen[21], Iwein Gyselinck[22], Piet Maes[23], Alexander Schauwvlieghe[24], Laurens Liesenborghs[25], Ann Belmans[26,27], Peter Verhamme[21] and Geert Meyfroidt[28] for the DAWn-plasma investigators[29]

[1]Dept of Hematology, University Hospitals Leuven and Dept of Microbiology and Immunology, Laboratory of Molecular Immunology (Rega Institute), KU Leuven, Leuven, Belgium. [2]Center for Cancer Biology, Vlaams Instituut voor Biotechnologie (VIB) and Center for Human Genetics, KU Leuven, Leuven, Belgium. [3]Belgian Red Cross, Blood Services, Mechelen, Belgium. [4]Faculty of Medicine and Health Sciences, Ghent University, Ghent, Belgium. [5]Belgian Red Cross, Service du Sang, Namur, Belgium. [6]Immune Response Service, Infectious Diseases in Humans Scientific Directorate, Sciensano, Brussels, Belgium. [7]Dept of Infectious Diseases, CHU Saint-Pierre, School of Public Health, Institute for Medical Immunology, Universite Libre de Bruxelles (ULB), Brussels, Belgium. [8]Dept of Anesthesiology and Intensive Care Medicine, and Dept of Infectious Diseases, CHC Mont Legia, Liege, Belgium. [9]Dept of Pulmonary Medicine, AZ Groeninge, Kortrijk, Belgium. [10]Dept of Infectious Diseases, Brugmann University Hospital, Brussels, Belgium. [11]Dept of Respiratory Medicine, AZ Maria Middelares Gent, Ghent, Belgium. [12]Dept of Respiratory Medicine, AZ Sint-Vincentius Deinze, Deinze, Belgium. [13]Dept of Infectious Diseases and Internal Medicine, UZ Brussel Hospital, Brussels, Belgium. [14]Dept of Internal Medicine and Infectious Diseases, Centre Hospitalier Regional (CHR), Liege, Belgium. [15]Infectious Diseases and General Internal Medicine, CHU de Liege, Liege, Belgium. [16]Dept of Intensive Care Medicine, Ziekenhuis Netwerk Antwerpen Campus Stuivenberg, Antwerp, Belgium. [17]Virology Unit, Institute of Tropical Medicine Antwerp, Dept of Biomedical Sciences, University of Antwerp, Antwerp, Belgium. [18]National Influenza Centre, Sciensano, Brussels, Belgium. [19]Dept of General Internal Medicine, University Hospitals Leuven, Dept of Microbiology, Immunology and Transplantation, KU Leuven, Leuven, Belgium. [20]Faculty of Veterinary Medicine, Animal Pathology, University of Liege, Liege, Belgium. [21]Dept of Cardiovascular Sciences, UZ and KU Leuven, Leuven, Belgium. [22]Laboratory of Respiratory Diseases and Thoracic Surgery (BREATHE), Dept CHROMETA, Respiratory Diseases UZ Leuven, Leuven, Belgium. [23]Clinical and Epidemiological Virology, Rega Institute for Medical Research, KU Leuven, Leuven, Belgium. [24]Dept of Haematology, Ghent University Hospital, Ghent, Belgium. [25]Laboratory of Virology and Chemotherapy, Dept of Microbiology, Immunology and Transplantation, Rega Institute for Medical Research, KU Leuven, Leuven, Belgium. [26]I-BioStat, KU Leuven, Leuven, Belgium. [27]University Hasselt, Hasselt, Belgium. [28]Dept of Intensive Care Medicine, University Hospitals Leuven, Dept of Cellular and Molecular Medicine, Laboratory of Intensive Care Medicine, KU Leuven, Leuven, Belgium. [29]A list of the DAWn-plasma investigators can be found in the Acknowledgements section.

Corresponding author: Geert Meyfroidt (geert.meyfroidt@uzleuven.be)

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Early transfusion of 4 units of high neutralising antibody titre convalescent plasma in hospitalised COVID-19 patients does not reduce mortality or the need for mechanical ventilation https://bit.ly/3fiRY2I

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Abstract

Background Several randomised clinical trials have studied convalescent plasma for coronavirus disease 2019 (COVID-19) using different protocols, with different severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) neutralising antibody titres, at different time-points and severities of illness.

Methods In the prospective multicentre DAWn-plasma trial, adult patients hospitalised with COVID-19 were randomised to 4 units of open-label convalescent plasma combined with standard of care (intervention group) or standard of care alone (control group). Plasma from donors with neutralising antibody titres (50% neutralisation titre (NT_{50})) ⩾1/320 was the product of choice for the study.

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Results Between 2 May 2020 and 26 January 2021, 320 patients were randomised to convalescent plasma and 163 patients to the control group according to a 2:1 allocation scheme. A median (interquartile range) volume of 884 (806–906) mL) convalescent plasma was administered and 80.68% of the units came from donors with neutralising antibody titres (NT_{50}) ⩾1/320. Median time from onset of symptoms to randomisation was 7 days. The proportion of patients alive and free of mechanical ventilation on day 15 was not different between both groups (convalescent plasma 83.74% (n=267) *versus* control 84.05% (n=137)) (OR 0.99, 95% CI 0.59–1.66; p=0.9772). The intervention did not change the natural course of antibody titres. The number of serious or severe adverse events was similar in both study arms and transfusion-related side-effects were reported in 19 out of 320 patients in the intervention group (5.94%).

Conclusions Transfusion of 4 units of convalescent plasma with high neutralising antibody titres early in hospitalised COVID-19 patients did not result in a significant improvement of clinical status or reduced mortality.