

# **SARS-CoV-2 Infection in an HIV-positive Patient in the Setting of Autologous Stem Cell Transplantation**

## **Authors:**

Griffin DWJ<sup>1</sup>, Wiltshire K<sup>2</sup>, McMahon J<sup>1,3</sup>, Kliman D<sup>2</sup>, Morrissey O<sup>1,3</sup>

1. Department of Infectious Diseases, Alfred Hospital, Melbourne, VIC
2. Department of Haematology and Bone Marrow Transplantation, Alfred Hospital, Melbourne, Australia
3. Department of Medicine, Monash University, Clayton, VIC

## **Case Presentation:**

A 51-year-old man with primary refractory Stage IIIb Hodgkin Lymphoma, on a background of previously well-controlled HIV infection, underwent Autologous Stem Cell Transplantation (AutoSCT) after achieving complete metabolic remission with salvage chemotherapy. At the time of transplant, he had a CD4 count of 331 cells/microL (9%) and viral load of 51 copies/mL on TAF/FTC and RAL.

His transplant was complicated by mucositis, and a single episode of culture negative febrile neutropenia on day +5, for which he received piperacillin-tazobactam and rapidly defervesced. A multiplex respiratory viral polymerase chain reaction (PCR) (HighPlex Respiratory Pathogens B, AusDiagnostics, Sydney), and bacterial cultures of blood and urine were negative. He was discharged on day +14, but remained transfusion dependent with unexpectedly delayed count recovery and poor graft function. Blood PCR for parvovirus B19, cytomegalovirus, and Epstein-Barr virus were negative, and his HIV viral load remained undetectable.

On day +53 the patient presented to the Haematology day therapy unit for a planned infusion of packed red blood cells. On admission screening, he reported a sore throat, presuming he had burnt it on dinner the night before, and underwent testing for COVID-19. Nasopharyngeal swab was positive for SARS-CoV-2 and confirmed at the national reference laboratory. Retrospective PCR testing of his stored specimen from day +5 was also positive, suggesting that this reflected late PCR positivity, and remained positive until day +93. SARS-COV-2 PCR on blood, bone marrow and stool were negative.

This case is unique, and is the only reported case of COVID-19 in the context of HIV infection and AutoSCT. It provides a platform for discussion about the possible interplay between HIV, AutoSCT and COVID-19 that may have resulted in a milder than expected illness. The Alfred hospital experience with COVID in persons with HIV will be presented in the context of the literature.

## **Disclosure of Interest Statement:**

The Authors have nothing to disclose.