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INTRODUCTION

- An optimal therapeutic modality against severe respiratory infections reduces viral load while suppressing intrapulmonary inflammation
- High titer immune globulins have been shown to diminish viral load in virus-mediated diseases and mitigate severe inflammatory responses

OBJECTIVE

- To describe the clinical use of ASCENIV™, a novel immune globulin intravenous (IGIV) human-slra containing elevated levels of antibodies to multiple respiratory pathogens as concomitant therapy in an adult hospitalized with COVID-19 infection and rapidly progressive ARDS

METHOD AND PATIENT CHARACTERISTICS

- 70-year-old African American male with history of bronchiectasis presenting to the emergency department with a one-week history of increasing dyspnea, dry cough, sudden onset of high-grade fevers, and body chills
- Initiated on broad-spectrum anti-infectives and steroids. Initial blood chemistries were unremarkable
- Pan cultures were negative but a COVID-19 diagnostic was confirmed positive
- Respiratory status deteriorated over the following week with continued progression of pneumonia requiring mechanical ventilation
- Patient consent was obtained

RESULTS

- On Day 11, patient was initiated on IGIV human-slra at 1500 mg/kg
- Patient developed high-grade fevers in the days following, prompting modification of anti-infectives and a second dose of human-slra IGIV at 750 mg/kg
- Over the next several days respiratory function improved, prompting extubation, but complications with a bout of severe tachypnea and declined respiratory function led to temporary re-intubation
- Continued clinical management led to steady improvement in respiratory status, warranting extubation and transition to rehabilitation with a confirmed negative COVID-19 test result
- Upon discharge, patient had no documented co-infections, reduced inflammatory markers, and recovery of lung function (**Figure 1**)

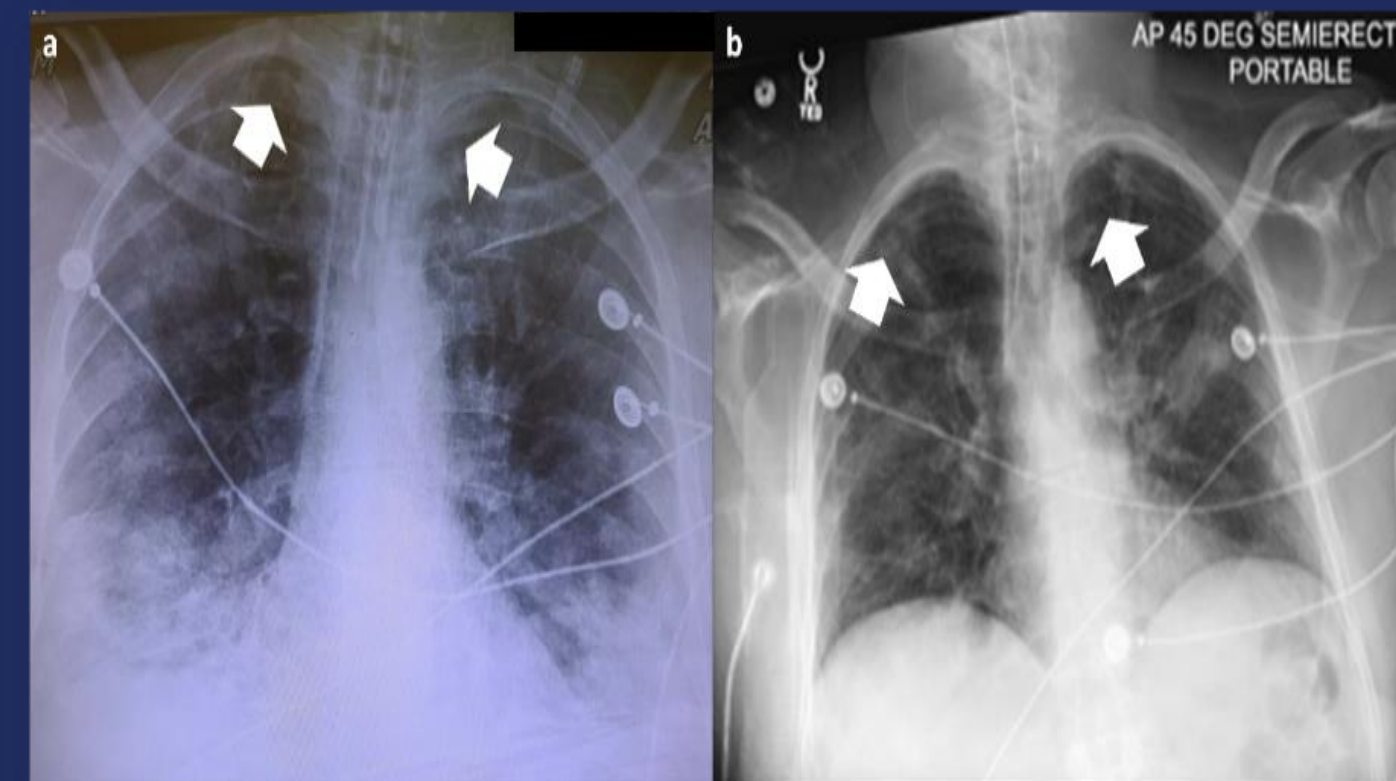


Figure 1: a. Chest X-ray from Day 13 displayed progression of confluent ground-glass consolidative opacities involving the lung bases and involvement of the periphery of the upper lobes bilaterally (arrows). b. Chest X-ray from Day 24 display persistent bilateral patchy pulmonary infiltrates with somewhat interim improved pulmonary ventilation (arrows). *Courtesy of M. Ismail, MD.*

CONCLUSIONS

- Challenging case documents the clinical outcome of a multi-modality therapeutic approach with broad-spectrum anti-infectives and concomitant ASCENIV™, IGIV human-slra for the management of severe respiratory infection
- Further investigation is warranted to evaluate the use of this novel IGIV as adjunctive therapy in vulnerable and immune compromised patients with severe respiratory disease