



AB191. SOH22ABS007. Use of point-of-care ultrasonography in the critical care setting to individualise care in a critically ill patient with post coronavirus disease 2019 (COVID-19) multisystem inflammatory syndrome

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Background: An 18-year-old woman with a background of thalassemia minor presented to the emergency department with a one-week history of sore throat, dyspnoea, a non-blanching abdominal rash, diarrhoea and vomiting. She had tested PCR positive on a nasopharyngeal swab for coronavirus disease 2019 (COVID-19) four weeks prior to her presentation. Despite fluid resuscitation, the patient was hypotensive, tachycardic and hypothermic on admission to the Intensive Care Unit (ICU). A noradrenaline infusion was commenced. She was in respiratory distress with an FiO₂ of 0.4 via venturi face mask and was unable to complete full sentences. Her inflammatory markers were elevated and her haemoglobin was 6.7 g/dL.

Methods: Point-of-care-ultrasonography (POCUS) of the patient's lungs revealed bilateral B-lines in the midzones and signs consistent with bilateral basal consolidations (GE Venue). Broad spectrum antimicrobials were commenced. The patient could observe the lung ultrasound findings and as she was a young self-ventilating patient, she was encouraged to cough and to use an incentive spirometer. The importance of chest physiotherapy was emphasised. A portable chest radiograph was obtained which demonstrated rapidly progressing bi-basal pulmonary infiltrates with increased interstitial markings bilaterally congruent with prior COVID pneumonia. A diagnosis of multisystem inflammatory syndrome (MIS-A)

complicated by pneumonia was made.

Results: A Focused UltraSound in Intensive Care (FUSIC) Heart scan demonstrated well filled cardiac chambers and a well filled IVC. Intravenous immunoglobulin (IVIG) and methylprednisolone were commenced immediately. The FUSIC Heart scan resulted in the IVIG (6–8 L) being administered over 24 hours to reduce the risk of venous congestion for this 57 kg patient with an estimated 3.5 litre circulating volume (65 mL/kg).

Conclusions: The use of POCUS early in critical care assessment of this patient ensured the patient wasn't inappropriately volume overloaded and encouraged patient engagement in chest physiotherapy to expedite her recovery.

Keywords: Coronavirus disease 2019 (COVID-19); intensive care; intravenous immunoglobulin (IVIG); multisystem inflammatory syndrome (MIS); ultrasonography

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

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