

Point-of-Care Ultrasound Findings in Multisystem Inflammatory Syndrome in Children: A Cross-Sectional.

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Background & Objectives: Multisystem inflammatory syndrome in children (MIS-C) associated with coronavirus disease 2019 is a novel pediatric condition with significant morbidity and mortality. To describe the point-of-care ultrasound (POCUS) findings in patients evaluated in the emergency department (ED) who were diagnosed with MIS-C.

Methods: A retrospective cross-sectional study conducted including patients <21-years-old who had POCUS performed for clinical care in a pediatric ED and were diagnosed with MIS-C. Point-of-care ultrasound studies were performed by pediatric emergency medicine attending physicians or fellows. Data abstracted by chart review included patient demographics, clinical history, physical examination findings, diagnostic test results, the time POCUS studies and echocardiograms were performed, therapies administered, and clinical course after admission.

ACADEMIC P.E.A.R.L.S

Pediatric Evidence And Research Learning Snippet



POCUS as a new tool in ER for managing MIS-C

Results: For the 24 patients included, 17 focused cardiac ultrasound, 9 lung POCUS, 7 pediatric modified rapid ultrasound for shock and hypotension, 1 focused assessment with sonography for trauma, 1 POCUS for suspected appendicitis, and 1 ocular POCUS were performed by 13 physicians. Point-of-care ultrasound identified impaired cardiac contractility in 5 patients, large intraperitoneal free fluid with inflamed bowel in 1 patient, and increased optic nerve sheath diameters with elevation of the optic discs in 1 patient. Trace or small pericardial effusions, pleural effusions, and intraperitoneal free fluid were seen in 3 patients, 6 patients, and 4 patients, respectively.

Conclusion: This study demonstrates the spectrum of POCUS findings in MIS-C. Prospective studies are needed to help delineate the utility of incorporating POCUS into an ED management pathway for patients with suspected MIS-C.

Key message: POCUS may prove important tool in gathering key clinical information in children with suspected/diagnosed MIS-C.

EXPERT COMMENT

“POCUS may prove beneficial in ED and ICU in providing key or critical information impacting acute (sometimes life saving) decisions in children with MSI-C too, as in other conditions. This is particularly when MSI-C is a novel disease that closely mimics other hyper inflammatory, TSS (Toxic Shock), CSS (Cytokine storm) syndromes. Further studies on this may make progress on MSIC management.”

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With warm regards,

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Reference

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