Reply to "Radiologic Manifestations of Multisystem Inflammatory Syndrome in Children"

We thank Yurttutan and colleagues [1] for their interest in our study [2]. Multisystem inflammatory syndrome in children (MIS-C) occurring in association with coronavirus disease (COVID-19) is rare. The syndrome emerged in the spring of 2020 in areas of both Europe and the United States that had a heavy burden of COVID-19 [2]. MIS-C has subsequently been reported in many countries, with an incidence of two cases per 100,000 persons younger than 21 years old. By comparison, the incidence of active infection with severe acute respiratory syndrome coronavirus 2 is 322 cases per 100,000 persons younger than 21 years old, according to data from New York State [3].

According to a CDC report of 570 patients across the United States, MIS-C affects children of all ages. Affected children typically are healthy, although obesity has been reported in 30% of patients [4].

We agree with Yurttutan and colleagues [1] that recognizing the imaging findings of MIS-C early and accurately is important, because many patients present with nonspecific symptoms, and imaging often is initially performed to exclude conditions such as pneumonia and appendicitis. Typical imaging findings may provide a clue to the diagnosis and may prompt early aggressive management before the development of shock and rapid deterioration, which can occur in these patients.

The findings of Yurttutan and colleagues [1] as well as those of Hameed et al. [5] confirm the results of our study [2]. The most common thoracic imaging findings are secondary to acute myocardial injury. They include cardiomegaly, pulmonary vascular congestion, and pleural effusions. The most frequent abdominal imaging findings reflect multiorgan inflammation and hypoalbuminemia, which are common in MIS-C. These include ascites, bowel wall thickening, mesenteric adenopathy, and increased renal echogenicity on sonography. In addition, our study also reported hepatomegaly and gallbladder wall thickening. We believe that the imaging findings mirror the laboratory findings, which typically include elevated levels of inflammatory markers, troponins, pro–B-type natriuretic peptide, and transaminases as well as increased levels of creatinine and blood urea nitrogen in some patients.

Patients with MIS-C may also present with neurologic symptoms, including headache and encephalopathy. Neuroimaging findings were recently reported by Lindan et al. [6] and include lesions of the splenium of the corpus callosum, parenchymal findings similar to those described in acute disseminated encephalomyelitis, and cranial and cauda equina nerve enhancement.

Although MIS-C is a severe illness that requires aggressive management, most patients recover completely with resolution of both clinical and imaging findings [2, 4, 6].

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E. Blumfield and her spouse are cofounders of Radnostics LLC, and they developed software for automated segmentation of vertebral bodies from chest and abdominal CT scans and automated calculation of bone mineral density, for which they own a U.S. patent. E. Y. Lee receives travel support and a speaking honorarium from Guerbet. M. C. Liszewski is an unpaid member of the medical advisory board at and receives grant, travel, and meal support from Carestream Health, Inc. The remaining authors declare that they have no disclosures relevant to the subject matter of this letter.

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