Anchoring on Multisystem Inflammatory Syndrome in Children
by Alan R. Schroeder MD, Associate Editor, Hospital Pediatrics

For many of us in the inpatient and emergency department world, multisystem inflammatory syndrome in children (MIS-C) has taken center stage in our clinical lives. Because the condition is new, vague, and still being defined, we entertain the diagnosis for a wide range of signs and symptoms. Children with common complaints such as abdominal pain and fever are now getting an array of diagnostic tests to assess for inflammation and myocardial injury/dysfunction.

The CDC has established criteria for diagnosis, but these criteria are, admittedly, fairly non-specific. One important criterion is that the patient has "no alternative plausible diagnoses," which introduces even more uncertainty. Does a positive throat culture count, especially given that a substantial proportion of children are colonized with Group A Streptococcus? What about rhinovirus from a respiratory panel?

The heightened emphasis on MIS-C has two immediate risks: one, excessive testing and treatment are provided for patients who don't have the condition, and two, diagnosis and treatment of other conditions may be delayed or missed altogether. Two articles released by Hospital Pediatrics highlight the latter concern.

The first article by Molloy et al (10.1542/hpeds.2020-005579) is part of our Bending the Value Curve series and involves a patient with persistent fever and pyuria on a urinalysis. Because this finding has been described in Kawasaki disease (which overlaps considerably with MIS-C), an extensive workup for MIS-C was initiated and the patient was not treated initially for pyelonephritis. The urine culture resulted positive the next day.

Dean et al (10.1542/hpeds.2020-005652) report a case series of five patients who were hospitalized with signs and symptoms consistent with MIS-C and underwent extensive workup for that condition. One patient received intravenous immunoglobulin. All five were ultimately diagnosed and treated for murine typhus.

Anchoring and misdiagnosis are not new phenomena in pediatric medicine. But the combination of the high prevalence of COVID-19, the flurry of attention over MIS-C, and the concern about "missing" a potentially serious condition have greatly increased the likelihood that premature closure will occur. Kids are still getting sick for other reasons, and these cases remind us to keep our differentials broad and proceed in a methodical, stepwise fashion.