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Predicting Who with Non-bloody Chronic Diarrhea Has Inflammatory Bowel Disease

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When children present with chronic non-bloody diarrhea, the differential diagnosis is large and includes inflammatory bowel disease (IBD).

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When children present with chronic non-bloody diarrhea, the differential diagnosis is large and includes inflammatory bowel disease (IBD). The challenge is that before moving to diagnostic endoscopy or colonoscopy the index of clinical suspicion must be high enough so that the benefits outweigh the risks. What might be some clinical and laboratory indicators that would suggest an endoscopy or colonoscopy is indicated? Van de Vijver et al (10.1542/peds.2019-2235) offer an answer to that question in a new study being released this month in our journal. The authors share the results of a prospective cohort study involving 193 patients between the ages of 6 and 18 years who presented with chronic non-bloody diarrhea. They were assessed for clinical symptoms (abdominal pain, weight loss, and other signs of IBD), C-reactive protein, hemoglobin levels, and fecal calprotectin (a biomarker that when elevated suggests leukocyte activity in the bowel). All patients had endoscopy to confirm IBD if present, and a predictive model emerged as a result of their findings that suggested that suggestive symptoms combined with blood and stool markers had an overall accuracy of 99.7% (c-statistic). The authors point out that using this strategy will result in only 14 of the patients needing endoscopy, of which three will be negative for IBD and 11 positive for IBD, with no missed cases.

This prediction rule would result in far fewer endoscopies when it comes to diagnosing occult IBD in the setting of non-bloody chronic diarrhea. Sounds great, doesn't it? Unfortunately, when a child presents with non-bloody chronic diarrhea there are some other entities besides IBD for which endoscopy might still be indicated. This is well explained in an accompanying commentary by pediatric gastroenterologists Drs. Richard Colletti and Jill Sullivan from the University of Vermont Robert Larner College of Medicine (10.1542/peds.2020-0699). They certainly note the strengths of the study by Van de Vijver et al but also caution us to consider other possibilities in our differential other than just IBD and to reconsider endoscopy as necessary. Even if not, they caution us to continue to follow children not getting endoscopy by the Van de Vijver et al critieria in case symptoms change. Reading this study and commentary will certainly mean that

when it comes to working up the etiologies for non-bloody chronic diarrhea, everything will come out fine in the end.

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