

Julie V. Schaffer, MD  
Dermatology and Pediatrics  
New York University School of Medicine  
New York, New York  
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Yale University School of Medicine  
New Haven, Connecticut  
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## Obesity and Gastrointestinal Disorders

### To the Editor:

We read with interest the article by Teitelbaum et al,<sup>1</sup> reporting an association between obesity and gastrointestinal symptoms. The authors address an important and clinically relevant topic because the prevalence of obesity is rising rapidly in children. We have also observed a significant relationship between obesity and gastrointestinal symptoms such as constipation<sup>2</sup> and gastroesophageal reflux.<sup>3</sup> However, a few points in the report need clarification.

First, the authors report gastroesophageal reflux disease (GERD) in 15.7% of patients in the gastrointestinal group, which implies that 118 patients (15.7% of 757 patients) had GERD. Their Table II reports data for only 90 patients. If 118 patients had GERD, then the percentage of overweight and obese children with GERD is likely to change. This may change *P* value for the difference with the control group and may affect conclusions. We believe that there is a similar discrepancy in numbers of patients with nonulcer dyspepsia between their results section and Table II.

Second, we agree with the use of Rome criteria for functional gastrointestinal disorders, but we are curious about how GERD was diagnosed in the study. The authors report that the diagnosis was based on clinical history and less commonly on endoscopic/histologic evidence. What symptoms or questionnaire did they use to diagnose GERD? Symptoms of GERD vary in children, and there are validation issues in different reflux symptom questionnaires.<sup>5</sup> We recently completed a study assessing reflux symptoms in obese children. We administered a questionnaire used in a previous study<sup>4</sup> assessing heartburn, vomiting, regurgitation, nausea, and dysphagia and calculated a weighted symptom score. We found that the prevalence rate of a positive reflux symptom score was much higher in 236 obese children compared with the control group of 101 children (13.1% vs 2%, odds ratio 7.3, CI 1.7 to 31).<sup>3</sup> Our observation is similar to that of the authors, and we agree that the association of obesity and GERD in children may have long-term implications as pointed out by Nurko<sup>6</sup> in the accompanying editorial.

Finally, because the authors report multiple gastrointestinal symptoms in the study, should the title of the article include “gastrointestinal symptoms” rather than “abdominal diseases”?

Uma Padhye Phatak, MD  
Dinesh S. Pashankar, MD  
Section of Pediatric Gastroenterology  
Department of Pediatrics

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## Reply

### To the Editor:

We appreciate the comments of Phatak and Pashankar and acknowledge the errors in the text of our article. A review of the original data reveals Table II to be correct, and thus the statistical analysis of the data remains accurate as presented. The percentage of patients seen during the study period with gastroesophageal reflux disease (GERD) should be 11.9% (90/757) and for nonulcer dyspepsia 8.2% (62/757).

The diagnosis of GERD was arrived at mainly on the basis of clinical history and response to empiric therapy with acid blockade. Such a “definition” of GERD is consistent with those provided in the position statements from the American College of Gastroenterology,<sup>1</sup> American Gastroenterological Association,<sup>2</sup> and the North American Society for Pediatric Gastroenterology and Nutrition.<sup>3</sup> No formal survey tools were used in arriving at a diagnosis.

Jonathan E. Teitelbaum, MD  
Joseph Jaeger, MPH

The Children’s Hospital at Monmouth Medical Center  
Long Branch, New Jersey  
10.1016/j.jpeds.2009.05.008

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