Reflux Questionnaire (ReQuest™)

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We read with interest the report by Bardhan and colleagues [1–3] that summarized the development and psychometric evaluation of the Reflux Questionnaire (ReQuest™). We agree with the authors that clinically relevant and psychometrically sound patient-rated symptom assessments are required for evaluating the outcomes of health interventions for gastroesophageal reflux disease (GERD), and applaud them for the initial work they have done. However, on careful review of the methods, we submit that there may still be some major problems with this instrument, and we would appreciate the authors clarifying several issues raised below.

Firstly, a factor analysis of the 67 ReQuest™ items resulted in dropping 7 items and the creation of 18–20 derived factors [1, 2], but which criteria were used to determine the number of factors? We do not understand the conceptual basis and rationale for including a number of lower GI symptoms and other complaints. Given the vast number of derived factors, there may be some over-factoring underlying the findings. There were also insufficient details about the rationale for, and scoring of, the 7 ReQuest™ dimension scores, total score,

and two subscale scores. What is the justification for combining dimension scores into two subscales? We remain uncertain how the individual items in the long-form version should be rated and scored. The authors state that the dimension scores are calculated as the product of the frequency (0–6 Likert scale) and intensity ratings (0–100 VAS), but the reported scores do not seem to reflect this scoring system [1–3]. Secondly, responsiveness was assessed using the responsiveness index [3] after effective treatment. How were ‘stable’ subjects defined for this analysis? Thirdly, while the application of an effective treatment was associated with statistically significant changes in ReQuest™ scores, can the authors provide information on minimally important differences or the clinical importance of these changes? Finally, we wondered whether the wording of some of the items was clumsy and will prove difficult for patients to understand in future trials, at least in English-speaking countries. For example, ‘How greatly since yesterday were you restricted by acid complaints?’, a ‘warm feeling of acid’, and a ‘burning feeling in the stomach with sudden appearance of acid saliva’ seem open to several interpretations.

References

- 1 Bardhan KD, Stanghellini V, Armstrong D, Berghöfer P, Gatz G, Mönnikes H: Evaluation of GERD symptoms during therapy. Part 1. Development of the new GERD questionnaire ReQuest™. *Digestion* 2004;69:229–237.
- 2 Bardhan KD, Stanghellini V, Armstrong D, Berghöfer P, Gatz G, Mönnikes H: International validation of ReQuest™ in patients with endoscopy-negative gastro-oesophageal reflux disease. *Aliment Pharmacol Ther* 2004;20:891–898.
- 3 Mönnikes H, Bardhan KD, Stanghellini V, Berghöfer P, Bethke TD, Armstrong D: Evaluation of GERD symptoms during therapy. Part 2. Psychometric evaluation and validation of the new questionnaire ReQuest™ in erosive GERD. *Digestion* 2004;69:238–244.