J Neurogastroenterol Motil, Vol. 22 No. 3 July, 2016
pISSN: 2093-0879 eISSN: 2093-0887
http://dx.doi.org/10.5056/jnm16075
Journal of Neurogastroenterology and Motility

Letter to the Editor

Probiotic Yeast Therapy for Irritable Bowel Syndrome

TO THE EDITOR: We read with interest the meta-analyses by Mazurak et al[1] in which the authors suggest that the use of different probiotics appears to have limited evidence for efficacy in irritable bowel syndrome (IBS).

Trials with single-strain probiotic revealed encouraging data in 20 of the 29 trials evaluated. Concerning the evaluation of yeasts, 3 studies employing *Saccharomyces boulardii* and 1 study with *Saccharomyces cerevisiae* were analyzed. The studies with *S. boulardii* were negative. In the study of Pineton de Chambrun et al[2] evaluating 179 IBS patients consuming 500 mg of *S. cerevisiae* or placebo during 8 weeks, improvement of abdominal pain was significantly higher ($P = 0.04$) in the verum group than the placebo group (63% vs 47%; OR, 1.88; 95% CI, 0.99-3.57) in the last 4 weeks of treatment. Mazurak et al[1] suggest that "this sudden change in pain severity mimics a "recruitment bias" of unknown origin and lacks any rational discussion and explanation".

We have difficulty with these comments. This study was performed in a double-blind, placebo-controlled, randomized design with 2 parallel groups of IBS patients. The baseline characteristics of the patients showed no significant differences between groups particularly for the abdominal pain scores (3.16 ± 1.1 vs 3.22 ± 1.12; $P = 0.76$). The significant modification of scores in the last 4 weeks in the treatment group compared to placebo was observed for abdominal pain and not for other symptoms, excluding potential recruitment bias in our study. Concerning "the lack of rational discussion and explanation" which may explain the efficacy of *S. cerevisiae*, we recommend reading the whole publication[2] which describes the preclinical studies performed to select this particular strain of yeast. Briefly, *S. cerevisiae* CNCM I-3856 was selected from the Lesaffre yeast strain collection after demonstrating analgesic effects through a local activation of the peroxisome proliferator-activated receptor alpha in a model of colorectal distension in rats. This effect was dose-dependent with a maximal effect at 10^{10} CFU/day, corresponding to the active dose of 500 mg used in our clinical trial. This effect was delayed and appeared 15 days after the beginning of treatment. Thus, we think that these preclinical evidences gave a good rationale to the use of *S. cerevisiae* to alleviate abdominal pain in IBS patients. Concerning *S. boulardii*, it has specific biochemical and genomic properties which may explain its different efficacy on abdominal pain. To conclude, we wanted to highlight that a second clinical study investigating the effect of *S. cerevisiae* CNCM I-3856 in IBS patients has been published[3] and confirms the results of this first clinical trial.

Fanny Pélerin[1] and Pierre Desreumaux[2,3,4]
[1]Lesaffre International, Lesaffre Human Care, France; [2]CHU Lille, Department of Gastroenterology, Claude Huriez Hospital, Lille, France; [3]Lille University North of France, Lille, France; and [4]INSERM U995, Lille, France

1. Mazurak N, Broelz E, Storr M, Enck P. Probiotic therapy of the irritable bowel syndrome: why is the evidence still poor and what can be done about it? J Neurogastroenterol Motil 2015;21:471-485.
2. Pineton de Chambrun G, Neut C, Chau A, et al. A randomized clinical trial of Saccharomyces cerevisiae versus placebo in the irritable bowel syndrome. Dig Liver Dis 2015;47:119-124.
3. Spiller R, Pélerin F, Cayzeele Decherf A, et al. Randomized double blind placebo-controlled trial of Saccharomyces cerevisiae CNCM I-3856 in irritable bowel syndrome: improvement in those with predominant constipation. United European Gastroenterol J 2016;4:353-362.

Conflicts of interest: None.