

# STUDY FACTS

## Randomized controlled trial on the efficacy of *Limosilactobacillus reuteri* ATCC PTA 4659 in acute uncomplicated diverticulitis

### Principal Investigator

Associate Professor Veronica Ojetti, Catholic University of the Sacred Heart, Rome, Italy

### Study objective

To evaluate the efficacy of supplementation with *Limosilactobacillus reuteri* ATCC PTA 4659 in the treatment of acute uncomplicated diverticulitis.

### Study design

A randomized, double-blind, placebo-controlled study which included 119 consecutive patients, 49 males and 70 females, diagnosed with acute uncomplicated diverticulitis. Mean age was 65 years.

The patients were randomly assigned into two groups. Both groups received standard therapy with intravenous fluids (Isolyte 2000 for 24 h) and bowel rest for 48 h. One group, 61 patients, were additionally supplemented with  $5 \times 10^8$  CFU of *Limosilactobacillus reuteri* ATCC PTA 4659 twice a day for 10 days, while the other group, 58 patients, were given the same dose of a placebo.

### Outcome parameters

Primary outcome was reduction of inflammatory markers in blood (C-reactive protein, CRP) and in stools (calprotectin), and reduction of abdominal pain, measured by the Visual Analogue Scale (VAS) score.

Secondary outcome was reduction in hours of hospitalization.

### Results

After 72 h, the CRP value decreased by 58.8% in the probiotic group, and by 40% in the placebo group ( $p < 0.05$ ). Calprotectin levels after 72 h, decreased by 17% in the probiotic group and by only 10.6% in the control group ( $p < 0.05$ ). Both groups showed a mean VAS score of 7 at enrolment, and a reduction of 4 points after 3 days. In the probiotic group, the mean hospitalization time was 75.5 h, compared to 83.5 in the placebo group.

### Conclusions

The authors suggest starting supplementation with *Limosilactobacillus reuteri* ATCC PTA 4659 together with fluids and bowel rest, as soon as possible, in patients with acute uncomplicated diverticulitis, to improve the course of the disease, gut inflammation and to prevent complications.

