

# STUDY FACTS

## **Supplementation with *Lactobacillus reuteri* ATCC PTA 4659 in patients affected by acute uncomplicated diverticulitis: a randomized double-blind placebo controlled trial**

### **Principal Investigator**

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

### **Study objective**

To test the efficacy of *Lactobacillus reuteri* ATCC PTA 4659 in treating acute uncomplicated diverticulitis.

### **Study design**

A randomized, double-blind, placebo-controlled study which included 88 consecutive patients, 34 males and 54 females, diagnosed with acute uncomplicated diverticulitis and admitted to the brief observation unit at the emergency department of Fondazione Policlinico Gemelli hospital at the Catholic University of Rome. Mean age was 61.9 years.

All patients were given two kinds of antibiotics, ciprofloxacin 400 mg twice daily and metronidazole 500 mg three times a day, for seven days.

Half of the group, 44 patients, were additionally supplemented with  $5 \times 10^8$  cfu of *Lactobacillus reuteri* ATCC PTA 4659 daily for 10 days, while the other half were given an equivalent dosage of placebo. The supplementation was given as two capsules which the participants were instructed to take 30 minutes after the intake of food.

### **Outcome parameters**

Primary outcome was reduced abdominal pain and inflammation markers (C-RP). Secondary outcome was reduced hours of hospitalization.

### **Results**

The results showed that the mean abdominal pain value was significantly more reduced in the group supplemented by *Lactobacillus reuteri* 4659 compared to those given placebo on day 3, 5, 7 and 10 ( $p < 0.0001$  at all time points).

C-RP (inflammation marker) was determined at enrollment and at 72 hours from hospital admission. The mean reduction of C-RP was significantly greater in the probiotic group compared to placebo ( $p < 0.0001$ ). The study authors concluded that the reduced inflammation was correlated to the reduction in abdominal pain in patients supplemented by the probiotic. This in turn led to a significantly faster discharge of these patients from the hospital, after 93 hours compared to 113 hours for patients in the placebo group ( $p < 0.0001$ ).

### **Conclusions**

Supplementation of *Lactobacillus reuteri* ATCC PTA 4659 significantly reduced abdominal pain and inflammation compared to placebo in patients with acute uncomplicated diverticulitis. It also resulted in a shorter period of hospitalization, thus giving economic benefits.

