

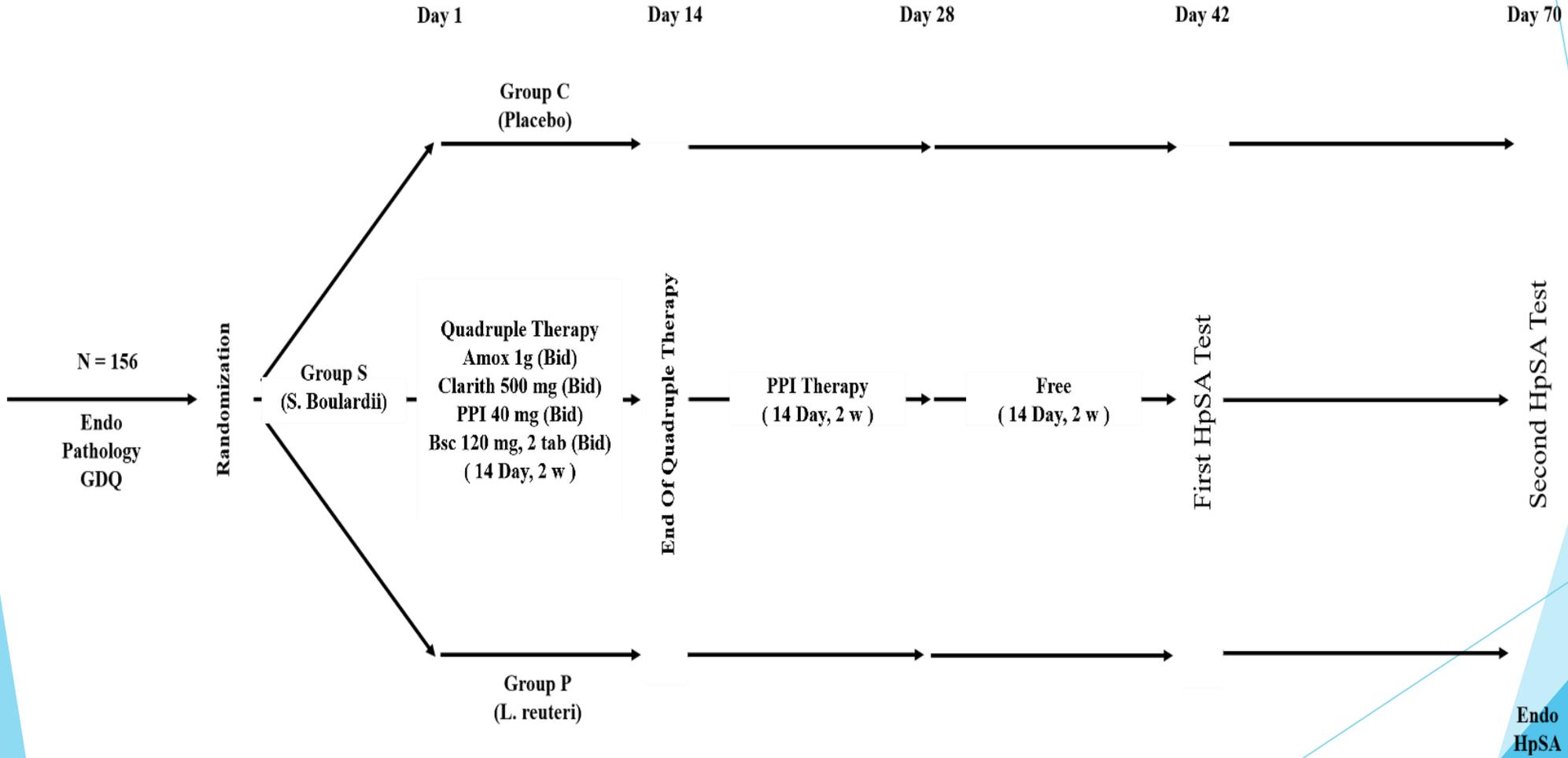
**Investigating the Effect of Quadruple Therapy with  
Saccharomyces Boulardii or Lactobacillus Reuteri Strain  
(DSMZ 17648) Supplements on Eradication of  
Helicobacter Pylori and Treatment's Side Effects:  
A Double-Blind Placebo-Controlled Randomized Clinical Trial**

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# Introduction

- ▶ Purpose of this study was investigating whether adding *saccharomyces boulardii* (DAILY EAST®) probiotic or a supplement of DSMZ 17648 *Lactobacillus reuteri* (PYLOSHOT®) to the standard quadruple treatment for *H. Pylori* infection after 14 days increases eradication rate and reduces the side effects.
- ▶ Due to lack of sufficient studies in this field, there is a need for a clinical trial and it is hoped that the results of this study will be useful in improving treatment of *H. pylori*.

# Materials and Methods



## Inclusion Criteria

- ▶ Symptomatic *H. pylori*-positive patients of both sexes aged between 16 - 74 years old whose infection was confirmed by endoscopy and pathology were included in the study.

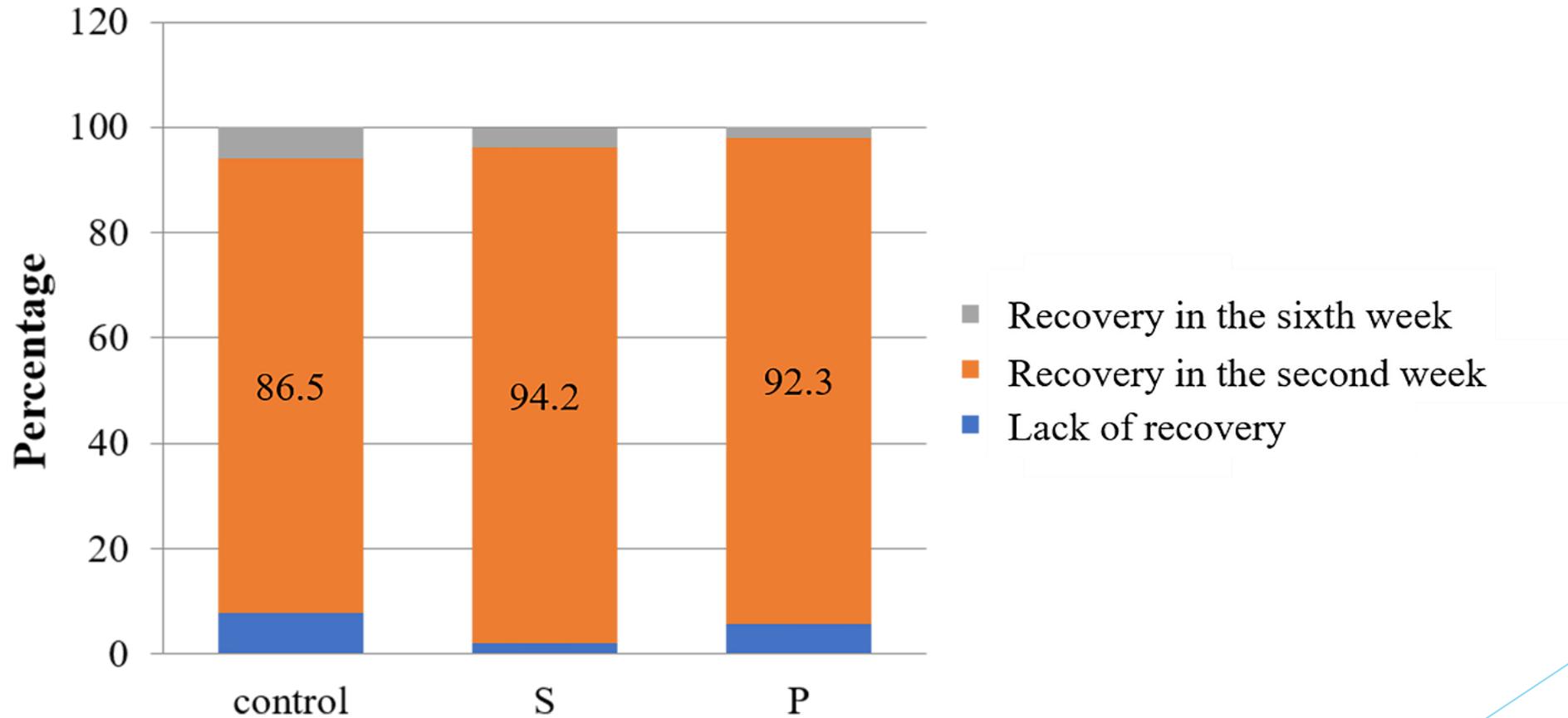
# Exclusion Criteria

- ▶ Patients with less than 15 years of age, pregnant or lactating women , patients with hepatic, cardio-respiratory, renal, and neoplastic diseases, those receiving antibiotics, PPIs, bismuth salts, or probiotics within the previous 4 weeks, patients with the history of gastric surgery and sensitivity to any of the drugs used in this study, those receiving any medication interfering with action of the lactobacilli, patients with the history of undergoing surgical procedures influencing stomach or small intestine with potential interference with the study, e.g., gastrectomy or gastric bypass, patients with autoimmune disease, organ transplantation, weight changes >3 kg over the last 3 months, those with the history of eradication of H. pylori infection, lactose intolerance, oral intake of antibiotics <3 months ago, alcohol or drug abuse, and those participating at other clinical trials at the same time were excluded from the study.

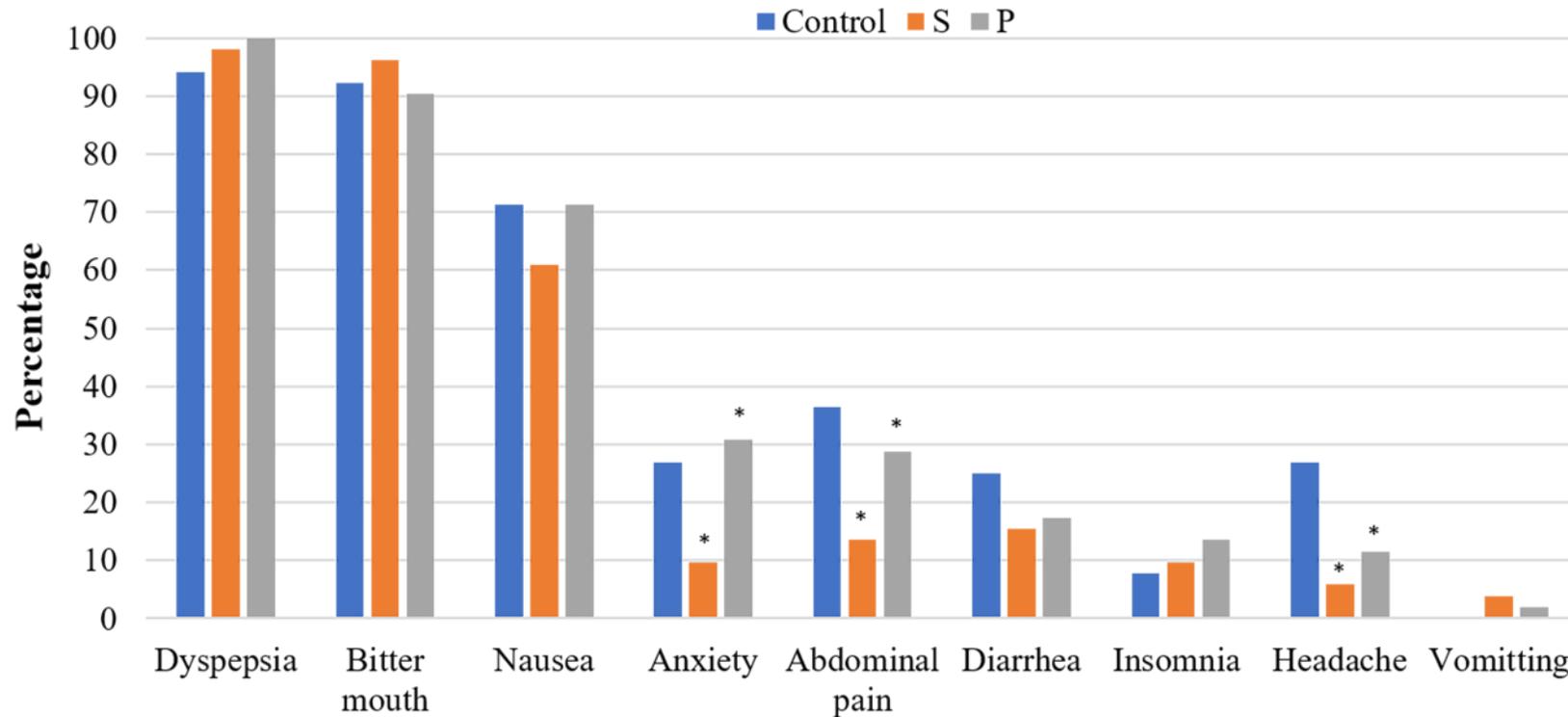
# Treatment Protocol

- ▶ The interventions were based on the standard quadruple therapy regimen containing bismuth for H. Pylori, which included 1 g of Amoxicillin twice daily, 500 mg of Clarithromycin twice daily, 40 mg of PPI twice daily, and 120 mg of bismuth subcitrate (two tablets, twice daily).
- ▶ Patients in Group S were given 1 capsule of DAILYEAST® (saccharomyces boulardii supplement 250 mg, Zist Takhmir, Tehran, Iran) b.i.d in combination with anti H. pylori quadruple therapy. Patients in Group P were given 2 capsules of PHYLOSHOT® (100 mg of non-viable Lactobacillus reuteri DSMZ 17648, Lactobacillus acidophilus, Lactobacillus casei, and Bifidobacterium lactis >10<sup>9</sup> CFU, Zist Takhmir, Tehran, Iran) b.i.d in combination with anti H. pylori quadruple therapy.
- ▶ Patients in the control group were also given a placebo capsule b.i.d along with anti H. pylori quadruple therapy. Duration of treatment was equal to 14 days.

# Rate of eradication of H. Pylori infection in the studied groups



# Distribution frequency of side effects observed in the study groups



## Conclusion

- ▶ In general, our findings revealed that the use of probiotic supplements containing *S. boulardii* or *Lactobacillus reuteri* (DSMZ 17648 strain) improved eradication rate of *H. Pylori* infection, but it was not statistically significant.
- ▶ On the other hand, *S. boulardii* could significantly reduce some side effects of *H. Pylori* eradication therapy.
- ▶ But, effectiveness of *Lactobacillus reuteri* on these cases was not significant and only headache was remarkably reduced, which was in accordance with the previous evidences in the literature.

خسته ناشید



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