

Effects of *L. rhamnosus* segregated from honey on the improvement of inflammation by *H. pylori* infection in animal model C57BL/6

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Aim: Considerably, about half of the world human population is infected by *H. pylori*. Current standard therapies against *H. pylori* are based on the use of one proton pump inhibitor plus two or more antibiotics the efficacy of this treatment has decreased, mainly due to the increase of antibiotic resistance but also to side effects. As regards to the antibiotics resistant and its side effects we tried to follow other therapies. The role of probiotics in the treatment of gastrointestinal infections has increased during some decades. One of the most important groups of probiotics is lactic acid bacteria. The aim of this study was to analyze the efficacy of *Lactobacillus rhamnosus* on gastric ulcer induced by *Helicobacter pylori* (ATCC43504).

Materials & Methods: In this experiment the mice were randomly divided into three experimental groups (eight mouse in each group) in group one, mice were inoculated with *H. pylori* suspension (5×10^{10} cfus/ml) in PBS by gavage twice daily for three consecutive days and animals were treated with *Lactobacillus rhamnosus* segregated from honey + bismuth and omeprazole (106cfus/ml) suspended in PBS twice daily for two weeks. In group two after infection will be treatment with clarithromycin (Positive control), in group three, after confirmation of infection, treatment was not used. (Negative control) Four weeks after the last inoculation, we confirmed the infection by determination of *H. pylori* stool Ag (ELISA) and histopathological examination. One mouse from each group was sacrificed and the tissues removed for histological experiment.

Result & Conclusion: After six weeks, the improvement or existence of inflammation in the biopsies sample of gastric ulcer in each group was investigated. *H. pylori* infection in mice was determined by the Eliza test and histopathology. Histopathology in the negative control group was normal, while in the *H. pylori* infected positive control group there was *H. pylori* colonization and inflammation. *Lactobacillus rhamnosus* + bismuth and omeprazole 106 CFU/mL treated groups showed significant improved stomach inflammation. *Lactobacillus rhamnosus* has healing effects on gastric ulcer induced by *Helicobacter pylori*.

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