

Biological and Histological Therapeutic Effects of Probiotic Bacteria on Laboratory Mice Infected by *Helicobacter pylori* Bacteria Isolated from Gastrointestinal Patients

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ABSTRACT

Pylorus is considered one of the most etiologies of active chronic gastritis, peptic ulcer, ulcer and inflammation of the duodenum, gastric cancer and tumors associated with the mucous layer. This study was done since there is a shortage in such local study in this concern. The study conducted the Isolation and diagnoses of *Helicobacter pylori* bacteria biopsy from 80 cases taken by the endoscope from patients in Tikrit Teaching Hospital, Iraq. Two biopsy samples were taken from each patient of the mucus layer of the antrum to investigate pylorus. The first sample was used for Rapid Urease Test (RUT), while the second sample was used for culturing on its selective media. Seventy three (73) samples which represent 91.25% of total samples were shown positive result for pylorus.

These bacterial isolates were orally administration for mice as infection trials, later some of these infection trials were treated with probiotic bacteria (*Lactobacillus plantrum*) as therapy and protection treatments. To demonstrate the vital and histological influences in the tissue of stomach of laboratory mice as well as determine the inhibitory influence of their impact in the cases of oral administration of probiotics type *Lactobacillus plantrum*. The study showed that the efficiency of the rapid urease test for the investigation of the *H. pylori* bacteria, as it was able to prove the presence of the bacteria in all positive samples taken. The catalase and oxidase tests were also showed positive results for all the 73 samples. In addition, these samples showed positive in culture media under micro aerophilic conditions. The results also showed inflammation changes in the stomach tissues of the mice infected with the *H. pylori* bacteria. The effectiveness of therapy treatment by probiotic bacteria (*Lactobacillus plantrum*) was very obvious by inhibition of the negative effect to a large extent in all measured standards has reached the state of gastric tissue in which case results resemble to the control group.

Keywords: Pylorus, Probiotic bacteria, Histological influences, Rapid urease test

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