

## **Effect of Sequential Therapy in H.Pylori Eradication in Comparison with Standard Triple Therapy**

### **Abstract**

**Background:** Helicobacter pylori is one of the most common pathogens and colonies in the world and its infection is an important risk factor for dangerous diseases such as gastric cancer. The treatment regimen that is currently used is the standard three-drug regimen therapy, which due to the increase in drug resistance, replace it with newer and more effective therapies is needed. One of these new therapies is sequencing therapy, which is considered as a suitable and effective treatment according to previous studies. The present study compares the effectiveness of these two treatments.

**Aim:** Determining the effectiveness of sequencing therapy in eradicating Helicobacter pylori infection.

**Methods and materials:** The present study was a descriptive-analytical study with the aim of retrospectively comparing the two standard three-drug therapies and treatment sequences in eradicating Helicobacter pylori infection in children referred to the Infectious Diseases Clinic of Bu Ali hospital of Ardabil university of medical sciences. A total of 321 people treated with sequence therapy and 410 people with standard three-drug method and a total of 731 people were treated with Helicobacter pylori in 1397-98. The sample size for each method using the formula was 130 people for the standard three-drug method and 130 patients were calculated for the sequential therapy method and a total of 260 patients entered the study.

**Results:** Two hundred and sixty patients in two groups of sequential therapy and standard three-drug method were included in the study. The mean age of the subjects in the drug sequential therapy was  $7.9 \pm 3.18$  years and in the standard three-drug method group was  $7.1 \pm 2.83$ . There was no significant difference between the two groups in terms of age ( $P > 0.05$ ). 61.2% of the total population were girls and 38.8% were boys. There was no significant difference between the

two groups in terms of gender, history of infection in parents and season of treatment ( $P > 0.05$ ). In terms of age, the success rate in the sequential therapy group decreased significantly with age ( $P > 0.05$ ). This comparison was not significant for the standard method group ( $P > 0.05$ ). In terms of gender, the comparison of response to treatment in the two groups was not significant ( $P > 0.05$ ). In terms of history of parental involvement, in the sequential therapy group, the response rate in patients with a negative history of parental involvement to treatment was significantly higher ( $P > 0.05$ ). This comparison was not significant in the standard method group ( $P > 0.05$ ). Comparison in terms of address and response to treatment was not significant in both groups ( $P > 0.05$ ). In terms of disease involvement and response to treatment, the comparison was significant in both groups. In both groups, the response to treatment in the first half of the year was higher than the last half. ( $P < 0.05$ ).

**Conclusion:** The results of this study showed that although the sequencing method is a new method in the treatment of *Helicobacter pylori* infection, but as a result, the treatment is not significantly different from the standard three-drug method. However, the success rate of treatment in children with *Helicobacter pylori* infection was slightly higher than the standard three-drug method.

**Keywords:** *Helicobacter pylori*, sequential therapy, standard three-drug method, pediatric