

HELICOBACTER PYLORI ERADICATION EXPERIENCE WITH SEQUENTIAL TREATMENT CONSIST OF ANTIBIOTICS USED IN CONVENTIONAL TRIPLE THERAPY**Serdar Olt*¹, Mustafa Erhan Altunöz² and Selçuk Yaylacı³**¹Adiyaman University Medical Faculty Department of Internal Medicine.²Kocaeli Darıca Farabi State Hospital Department of Gastroenterology.³Rize Fındıklı State Hospital Department of Internal Medicine.**Corresponding Author: Dr. Serdar Olt**

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ABSTRACT

Helicobacter pylori eradication treatment protocols are constantly changing due to the antibiotic resistance and different rates of different combinations can be successful in different countries because of this resistance. In the light of recent studies, the sequential treatment modalities are now a prominent choice of treatment today due to high rates of eradication. In this study, the success rate of sequential treatment in Helicobacter pylori eradication was investigated in non-ulcer dyspepsia patients with positive Helicobacter pylori. 92 non-ulcer dyspepsia patients with positive Helicobacter pylori were included in the study. The presence of Helicobacter pylori was detected by histopathological examination of the biopsy specimen taken from the antrum and corpus. Our Helicobacter pylori eradication treatment protocol was 30 mg lansoprazole twice daily and 1 gram amoxicillin three times daily were given to the patients in the first 7 days, in the second 7 days 30 mg lansoprazole twice daily, 500 mg clarithromycin twice daily and 1 gram amoxicillin twice daily. 6 weeks after the end of the treatment, all of the patients were re-evaluated for Helicobacter pylori eradication by the urea breath test. Eradication was considered to be successful in patients with negative urea breath test. In this present study the helicobacter pylori was eradicated in 89.1% of the patients. As a result, the method of nitroimidazole-free sequential treatment we applied in the H pylori eradication therapy was found to be a more successful method than the classic triple therapy in the primary treatment. Given the success rate of eradication, we suggest a sequential treatment that consists of the antibiotics used in classic therapy may be an important option in the first-line treatment.

KEYWORDS: Helicobacter Pylori eradication, Conventional triple therapy, Sequential eradication treatment.**INTRODUCTION**

H pylori infection is one of the most significant morbidity and mortality reasons worldwide; because of diseases which are associated with H pylori such as peptic ulcer. Non-ulcer dyspepsia, peptic ulcer and gastric MALT-lymphoma are the diseases associated with H pylori, and eradication is recommended in these cases according to the recent guidelines published.^[1] In the literature it was also associated with idiopathic thrombocytopenia and idiopathic iron deficiency.^[2-3] H pylori infection is decreasing in developed countries, whereas it is detected at very high rates in developing countries and the disease is acquired through oral-fecal route. Low socioeconomic status and education level, living in a crowded house-hold, drinking infected water are among the important risk factors that cause infection. Although H pylori eradication is not a fully resolved issue, many studies provided regimens with higher rates of success of eradication. Antibiotic resistance seems to be an important problem in the H pylori eradication, and updating the treatment regimens with new studies

constantly becomes a necessity. Serious decline in the rate of success with the classic triple therapy, in parallel with the increasing clarithromycin resistance all over the world, gave birth to other treatment regimens. The success rate of these have risen to >90% by the use of nitroimidazole with the sequential treatment rather than Clarithromycin.^[4] H pylori eradication rate with classic triple therapy is approximately 80% in the recent studies. In this study, we tried to find out whether we can detect a significant difference in the rate of successes between a sequential treatment without nitroimidazole and the classic triple therapy.

MATERIALS AND METHODS

Non-ulcer dyspepsia (NUD) patients over 18 years with dyspepsia complaints such as abdominal pain, bloating and discomfort, which have normal routine laboratory tests and abdominal ultrasonography and had no ulcer in upper gastrointestinal endoscopy, were included in the study. Exclusion criteria in our studies were; antisecretory treatment, reflux esophagitis, gastric

surgery, pregnancy, chronic liver disease, renal failure, NSAIDs usage in the last one month, *Helicobacter pylori* eradication therapy in the last 3 months. The presence of *H. pylori* was detected by histopathological examination of the biopsy specimen taken from the antrum and corpus. The presence of *Helicobacter pylori* in biopsy specimens were evaluated according to the Sydney classification. 92 NUD patients (34 male, 58 female) with positive *H. pylori* were included in the study. *Helicobacter pylori* eradication treatment protocol was applied as follows 30 mg lansoprazole twice daily and 1 gram amoxicillin three times daily were given to the patients in the first 7 days, in the second 7 days 30 mg lansoprazole twice daily, 500 mg clarithromycin twice daily and 1 gram amoxicillin twice daily. 6 weeks after the end of treatment, all of the patients were re-evaluated for *H. pylori* eradication by the urea breath test. Eradication was considered to be successful in patients with negative urea breath test. Statistical Package for the Social Sciences (SPSS) for Windows, version 17.0 software was used in all calculations. Descriptive Statistic analysis was used for statistical analysis.

RESULTS AND DISCUSSIONS

Thirty-four patients (37%) were male and fifty-eight (63%) were female. Mean age of the patients was 44 ± 14 (average \pm standard deviation). *H. pylori* was eradicated in 89.1% of the patients who took 30 mg lansoprazole twice daily and 1 gram amoxicillin three times daily were given to the patients in the first 7 days, in the second 7 days 30 mg lansoprazole twice daily, 500 mg clarithromycin twice daily and 1 gram amoxicillin twice daily. The demographic data of the patients and the eradication success rates are shown in Table 1.

TABLE: 1 The demographic features of the patients and the *H. pylori* eradication success rate

Parameters	n=92
Age (mean \pm standard deviation)	44 \pm 14
Gender (M/F)	34/58
<i>H. pylori</i> Eradication rate (n%)	89.1%

Clarithromycin that has a long half-life is the main drug used in *Hp* eradication treatment. Classical two-week triple therapy regimen containing Clarithromycin (Proton pump inhibitor + amoxicillin + clarithromycin) is still the most widely accepted first-line treatment and it is frequently prescribed today. A large number of studies have reported that the success rate of the *H. pylori* eradication therapy has fallen in recent years.^[5] In parallel with the literature, the *H. pylori* eradication rates are decreasing gradually in Turkey with 14-day standard triple therapy; drug resistance, duration of treatment and patient compliance may be presented as the possible reasons for this.^[6-7] There are studies indicating that the *H. pylori* eradication success may vary among ethnic groups.^[8] Although the eradication success rates with the classic triple therapy were reported as 80% approximately in the literature, this ratio is found even lower in Turkey in recent years.^[9-12]

The success rate of the eradication treatment was found as 89.1% in our study by giving 30 mg lansoprazole twice daily and 1 gram amoxicillin three times daily were given to the patients in the first 7 days, in the second 7 days 30 mg lansoprazole twice daily, 500 mg clarithromycin twice daily and 1 gram amoxicillin twice daily. Cirak et al. have found approximately 50% of clarithromycin resistance in Turkey in their study conducted in 2007.^[13] The increased bacterial resistance against clarithromycin is the most important reason of the failure of the eradication success not exceeding the desired rate of 80% in the classical treatment. In a study examining 10 years of data in Turkey, the *H. pylori* eradication success rate was found 74.7% with the classic triple therapy.^[14]

CONCLUSIONS

Although eradication rates of the sequential treatment modalities vary according to geographical regions and antibiotic resistance in the literature, their superiority compared with the conventional triple therapy was proved in our study as well. Normally, metronidazole or imidazole is used in the sequential treatment because of the clarithromycin resistance, and the eradication rate is found >90%. The point we wish to emphasize in our study, is the achievement of a higher eradication rate of 89.1% compared with conventional triple therapy without adding any drug from the nitroimidazole (metronidazole) group in the sequential treatment. Given the success rate of eradication, we suggest a sequential treatment that consists of the antibiotics used in classic therapy may be an important option in the first-line treatment.

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