

The Effect of Eradication Therapy in Combination with an Atypical Neuroleptic on Patients with Hp-Associated Peptic Ulcer and Autonomic Therapy Syndrome

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Abstract Relevance: Acid-dependent erosive and ulcerative diseases rank first among the pathologies of the digestive system. Factors such as the rapid change in the socio-economic structure of a modernized society, which is manifested by active urbanization, an acceleration in the pace of life and the negative stressful impact of the environment, a sharp deterioration in the quality of nutrition, undoubtedly affects the health of the population and makes its own adjustments to the overall picture of morbidity in the country. Purpose of the work: to study the effect of an atypical antipsychotic in combination with eradication therapy on patients with Hp-associated peptic ulcer and autonomic therapy syndrome in order to select the best treatment option for these associated conditions in peptic ulcer. Materials and methods: 90 patients with peptic ulcer associated with *Helicobacter pylori* and vegetative dystonia syndrome were selected in a scientific work. All patients were divided into 3 groups: Group I (main) - patients taking an atypical antipsychotic (sulpiride) in combination with quadruple; Group II (comparative) - patients taking an antidepressant (amitriptyline) in combination with quadruple therapy; Group III (control) - patients exclusively taking quadruple therapy. Conclusions: Thus, taking into account the results of the study, it can be noted without a doubt that there is a significant shift towards improving the state of health in patients who took quadruple therapy in combination with an atypical antipsychotic (sulpiride), since an improvement in the state of the autonomic nervous system is revealed: in which earlier before treatment it was noted the prevalence of vagotonia, and after the therapy, there is a shift towards normotonia, identified on the basis of a questionnaire and a functional test. And with repeated fibrogastroduodenoscopy, the index of the stage of ulcer healing in relation to the comparative and control groups is much higher, which could be seen from the stages of prevalence of S2 scarring than in the control and comparative groups.

Keywords Peptic ulcer, *Helicobacter pylori*, Urease breath test, Autonomic dystonia syndrome, Eradication therapy, Sulpiride

1. Relevance

Acid-dependent erosive and ulcerative diseases rank first among the pathologies of the digestive system. Peptic ulcer affects people at the most active, energetic age, often causing temporary, sometimes even permanent disability [8].

Despite the many "solved" problems of peptic ulcer (PU), concerning the etiology and pathogenesis of peptic ulcer and / or stomach and duodenum deserves a fresh and impartial look from the point of view of evidence-based medicine [4].

Imbalance between the factors of "protection" and factors of "aggression" of the mucous membrane of the stomach and duodenum leads to the development of peptic ulcer [9]. Factors such as alcohol abuse, smoking, psychological stress contribute to the manifestation and exacerbation of the

disease [7].

In the last two decades, many foreign clinicians and domestic gastroenterologists have emphasized in capital letters that peptic ulcer is an infectious disease caused by colonization of the gastric mucosa and / or duodenal bulb by the spiral bacterium *Helicobacter pylori* (HP) [11].

According to the latest updated data, 83% of gastric ulcers worldwide are associated with *H. pylori* infection [2].

Given the new ideas about *Helicobacter pylori*, it can be impartially noted that it is one of the leading aggressive factors in the development of PU. In 2017, data from a systematic review were published, and it provided statistics as - approximately more than 4 billion people worldwide are infected with HP [6]. Differences in the prevalence of HP have been established not only between continents and countries, but also between regions of the same country. In 2019, the data of Karimov M.M. were studied and published, where reliable data were provided that the prevalence of HP in Uzbekistan on average exceeds 80% in the population. This indicates that Uzbekistan is a region where HP infection

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is quite high for this pathogen [5].

2. Purpose of the Work

To study the effect of an atypical antipsychotic in combination with eradication therapy on patients with Hp-associated peptic ulcer and autonomic therapy syndrome (ADS) in order to select the best treatment option for these associated conditions in peptic ulcer.

3. Materials and Methods

90 patients with peptic ulcer associated with *Helicobacter pylori* and vegetative dystonia syndrome were selected in a scientific work. All patients were divided into 3 groups: Group I (main) - patients taking an atypical antipsychotic (sulpiride) in combination with quadruple; Group II (comparative) - patients taking an antidepressant (amitriptyline) in combination with quadruple therapy; Group III (control) - patients exclusively taking quadruple therapy. Quadruple therapy included a proton pump inhibitor (pantoprazole 20 mg 2 times a day), a bismuth drug (De-nol 120 mg 4 times a day), antibiotic therapy (amoxiclav 1000 mg 2 times and metronidazole 500 mg 3 times a day) with a

course of treatment of 10 days. This therapy was based on the V Maastricht Consensus. The C13 breath urease test was used to determine the presence of the Hp ulcerative pathogen. In order to determine the presence of an ulcer defect, the traditional fibrogastroduodenoscopy method was used, and the Sakita-Miwa classification was used to determine the state of the ulcer (active /healing/ scarring). In this classification, the A1 and A2 stages indicated an active fresh ulcer, the H1 and H2 stages meant the healing stage, and the scarring stage was classified as S1 and S2. The status of the autonomic nervous system was determined using the Spielberger test and the Danini-Ashner test.

4. Research Results

During a clinical examination, patients mainly complained of pain (with localization in the epigastric region), heartburn, nausea, sometimes vomiting, severe weakness, etc. It should be noted that depending on the localization of the ulcer, pain occurred before meals (hungry) and after meals (30-60 minutes).

The rate of occurrence of patient complaints at the time of the first examination.

Groups	Pain in the epigastrium	"Hungry Pains"	Pain after eating	Nausea	Vomit	Sour burp	Weakness	Weight loss
I	40	23	17	33	16	30	35	15
II	40	25	15	35	13	26	35	18
III	10	5	5	8	2	6	7	4

As can be noted among the complaints, "pain" prevails in absolutely all groups, followed by "nausea". The lowest rate of complaints is for "vomiting" and "weight loss". The indicators of the clinical examination and complaints of patients listed above significantly decreased and even disappeared after 10 days of quadruple therapy + prosulpin (sulpiride), quadruple therapy + amitriptyline, and only quadruple therapy, depending on the study group.

Before treatment of patients with peptic ulcer disease associated with HP and vegetative dystonia syndrome, the average C13 respiratory urease test for determining HP according to the method described above was $N=111.37$ titer at a rate of ≤ 50 . The re-examination was carried out on the C13 respiratory urease test 41 ± 1 days after the first examination (10 days of therapy + 30 days of interval).

The results of the C13 breath urease test to determine HP before and after treatment, divided into groups.

Patients' groups	Before therapy (titer)	After therapy (titer)
I	112,87	35
II	110,15	38
III	111, 22	36

As can be seen from the indicators in the table above, there

was eradication of *Helicobacter pylori* in all groups.

During the fibrogastroduodenoscopy examination in the main group, stage A₁ was revealed - 19 patients, stage A₂ in 21 patients before treatment. After treatment, stage S₁ was determined in 9, and S₂ in 31 patients. In the comparative group, these indicators were before treatment: A₁ - n = 23, A₂ - n = 17, after treatment S₁ - n = 21, S₂ - n = 19. In the control group: A₁ - n = 6, A₂ - n = 4, after therapy H₂ - n = 6, S₁ - 4.

As noted in the materials and methods, Spielberger's questionnaire was used to determine the state of the autonomic nervous system, which consists of two parts.

Main group (before treatment):

1. Personal anxiety - the mean score was 63.5 points before treatment, indicating a very high level of anxiety n = 29 patients.
2. Reactive anxiety - the mean score was 44.7 points before treatment, indicating a very high level of anxiety n = 21 patients.

It should be noted that some patients had both reactive and personal anxiety in all the studied groups.

Comparative group (before treatment):

1. Personal anxiety - the mean score was 58.8 points before treatment, indicating a very high level of

anxiety n = 31 patients.

2. Reactive anxiety - the mean score was 37.4 points before treatment, indicating a very high level of anxiety n = 23 patients.

Control group (before treatment):

1. Personal anxiety - the mean score was 68.1 points before treatment, indicating a very high level of anxiety n = 5 patients.
2. Reactive anxiety - the mean score was 40.2 points before treatment, indicating a very high level of anxiety n = 6 patients.

It should be noted that one patient had both personal anxiety and situational anxiety.

Spielberger test scores after therapy (in points)

Patients	Personal anxiety	Reactive anxiety
I	13.4	18.2
II	32.4	29.2
III	52.3	38.5

As the survey data show, patients of the main group who received an atypical antipsychotic have a strong shift towards correcting the state of the autonomic nervous system, which means significantly low reactive and personal anxiety. And in the comparative group, these indicators decreased from high scores to average scores, which gives an indication of the relative improvement in the condition of patients. And in the control group, no improvement is observed.

Danini-Ashner test.

1. Normasthenic type of sample

Groups	Before treatment	After treatment
I	n = 3	n = 36
II	n = 1	n = 26
III	n = 1	n = 1

2. Sympathicotonic type of test

Groups	Before treatment	After treatment
I	n = 5	n = 1
II	n = 6	n = 3
III	n = 2	n = 3

3. Vagotonic type of sample

Groups	Before treatment	After treatment
I	n = 32	n = 3
II	n = 33	n = 11
III	n = 7	n = 6

5. Conclusions

Thus, taking into account the results of the study, it can be noted without a doubt that there is a significant shift towards improving the state of health in patients who took quadruple therapy in combination with an atypical

antipsychotic (sulpiride), since an improvement in the state of the autonomic nervous system is revealed:

- 1- In which earlier before treatment it was noted the prevalence of vagotonia, and after the therapy, there is a shift towards normotonia, identified on the basis of a questionnaire and a functional test.
- 2- And with repeated fibrogastroduodenoscopy, the index of the stage of ulcer healing in relation to the comparative and control groups is much higher, which could be seen from the stages of prevalence of S2 scarring than in the control and comparative groups.
- 3- This improvement in health outcomes in this study can certainly improve patient quality of life, days off work, and reduction in hospital bed days.

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