

Prediction of Gastropathy Induced Non-Steroidal Anti-Inflammatory Agents in Patients with Rheumatoid Arthritis

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Annotation: Objectives. To make an evaluation of the risk of the development of erosive and ulcerative lesions of the mucous membrane (MM) of the gastroduodenal zone induced by the intake of nonsteroid anti-inflammatory drugs (NSAIDs) on the basis of clinical and morphological parameters of the gastric mucosa in patients with rheumatoid arthritis (RA). The evaluation of predicting the risk of gastropathy development induced by the intake of NSAIDs (NSAID-gastropathy) with the application of discriminant analysis and multiple logistic regression was made in 74 patients (58 women and 16 men) with RA using the following clinical characteristics: age, the presence of complicated or uncomplicated gastroduodenal ulcer in their anamnesis, the intake of glucocorticoids, antiplatelet agents, duration of RA disease, gender, the presence of co-morbidities, the use of proton pump inhibitors, the duration of NSAIDs administration, simultaneous intake of two drugs from the group of NSAIDs, smoking, drinking alcohol in doses greater than the safe ones as well as the presence of dyspepsia symptoms. The assessment of the risk of NSAID-gastropathy development, based on clinical features and morphological parameters of MM of the stomach (atrophy, inflammation, the activity of MM, the

amount of lymphoid follicles and the degree of the microorganism *Helicobacter pylori* contamination in the fundal and antral parts of the stomach was made in 33 patients (21 women and 12 men) with RA.

Keywords: nonsteroid anti-inflammatory drugs, risk factors, gastropatiya, rheumatoid arthritis.

Relevance

More than 30 million people use it every day in the world nonsteroidal anti-inflammatory drugs (NSAIDs) as pain relievers, anti-inflammatory solid and antiplatelet agents [10]. So, from the beginning this century, an increase in NSAID consumption every 10 years increases 2-3 times [11,12].

IN THE USA in 2004, a total of 111 million prescriptions NSAID use was stopped; further the increase in their use, which is associated with an increase in the number of patients with joint pathology. In this case, it is necessary emphasize that NSAIDs are an integral part of basic treatment of many chronic non-infectious diseases [11].

Analysis of the dynamics of the frequency of ulcerative bleeding, allows us to conclude that over the past 10 years, the death bleeding and perforation in case of NS decrease from 11.6 to 7.4% and increased from 14.7 to 20.9% in patients, taking ASA and NSAIDs [11].

Gastroduodenal zone due to taking non-steroidal anti-inflammatory drugs (NSAIDs) are serious medical and social problem, since NSAIDs are widely used in clinical practice [12]. According to literature gastrointestinal damage in rheumatoid arthritis accounts for 13 to 62% of cases and occupies a significant place among extra-articular manifestations of this disease [2].

As evidenced by clinical experience, when taking NSAIDs can affect all parts of the gastrointestinal tract of the path, but the most frequent and dangerous by the last damage to gastroduodenal areas, primarily the antrum of the stomach - erozii, ulcers, bleeding and perforation [2].

Prevention of NSAIDs-gastropathy is based on its timely forecasting. An important task in the diagnostic and prevention of NSAID gastropathy. Define individual forecast its development. The impact of the following factors for the risk of erosions and ulcers, NSAID-related: history of not complicated and uncomplicated ulcer diseases; older age; use high dose NSAIDs; simultaneous beating of two or more medicinal products from the NSAID group; co-administration of NSAIDs with antiplatelet agents, glucocorticosteroids (GCS) or anticoagulants [5,11,12].

Gastrointestinal mucosal protection problem with NSAIDs is extremely relevant, especially in the elderly, since it is in this age group that the highest risk of complications. The risk of gastroduodenal erosive ulcers has been shown to be reduced with the use of selective NSAIDs and their combination with proton pump inhibitors [3,4].

Existing international conciliation instruments recommend stratifying patients, taking NSAIDs, at risk in response to their factors risk, which makes it possible to determine the treatment tactics and prevention of NSAID gastropathy [5].

Research objective

The purpose of the study is to evaluate risk of erosive ulcers the mucous membrane of the gastroduodenal zone, induced by NSAIDs, based on clinical characteristics and morphological

parameters, gastric mucosa in patients with RA.

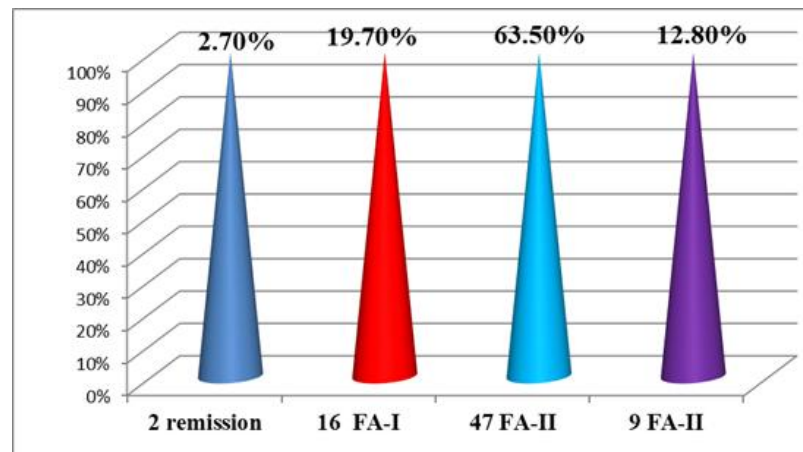
Materials and methods

Promising method of our scientific work In the rheumatology department of the Bukhara regional multidisciplinary hospital, 74 patients with suspected gastropathy aged 24-76 years who received inpatient treatment for rheumatoid arthritis were identified for 6 months (January-June) 2022. During the examination, the American Rheumatological Association (V.A. Nasonova, M. G.1989 Astapenko) obtained a group of patients with a classic diagnosis of RA based on the developed diagnostic criteria. In particular, the duration of the disease in RA is 7.76 ± 9.15 years on average, 51 ± 9.15 years.

Study results

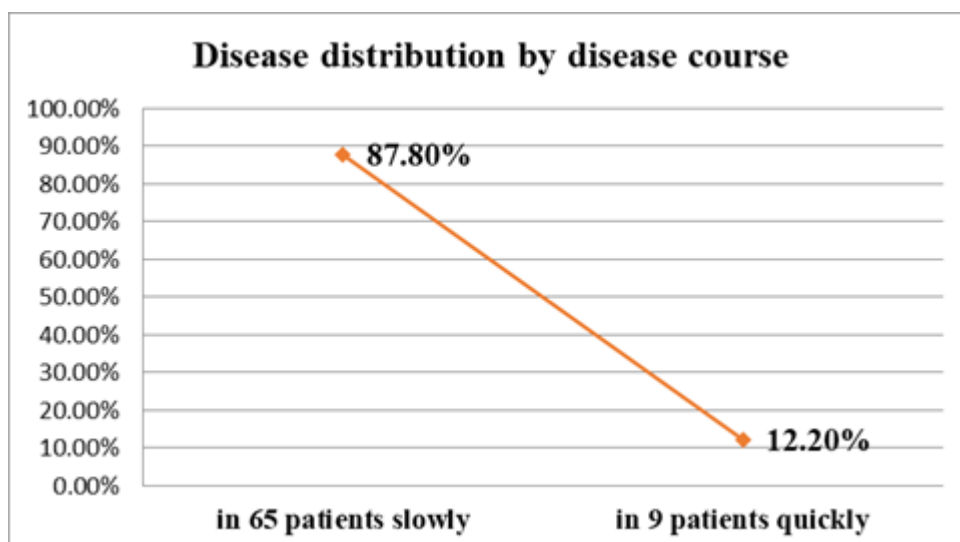
According to the results of clinical and laboratory tests, 2 (2.7%) of 74 patients had remission and 72 patients had activity level 1 (19.7%), 47 (63.5%) had level 2, and 9 (12.8%) had level 3 activity level

1- Chart



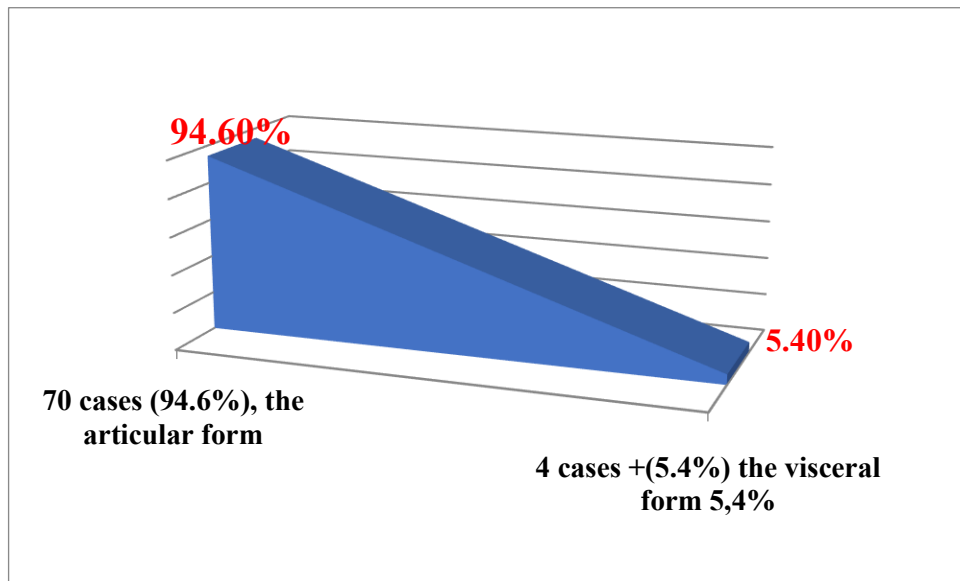
To predict the risk of occurrence using a discriminatory analysis based on NSAID gastropathies, the most important clinical features of NSAID gastropathy were identified, which may gradually affect the following probability of clinical properties: presence of two or more NSAIDs, anamnestic history with ulcers of the stomach and duodenum disease, from bad smoking habits and sex. By the nature of the course of the disease, all patients are distributed as follows: 65 patients with a slowly developing form (87.8%) and 9 patients with a rapidly developing form (12.2%) were identified

2- Chart



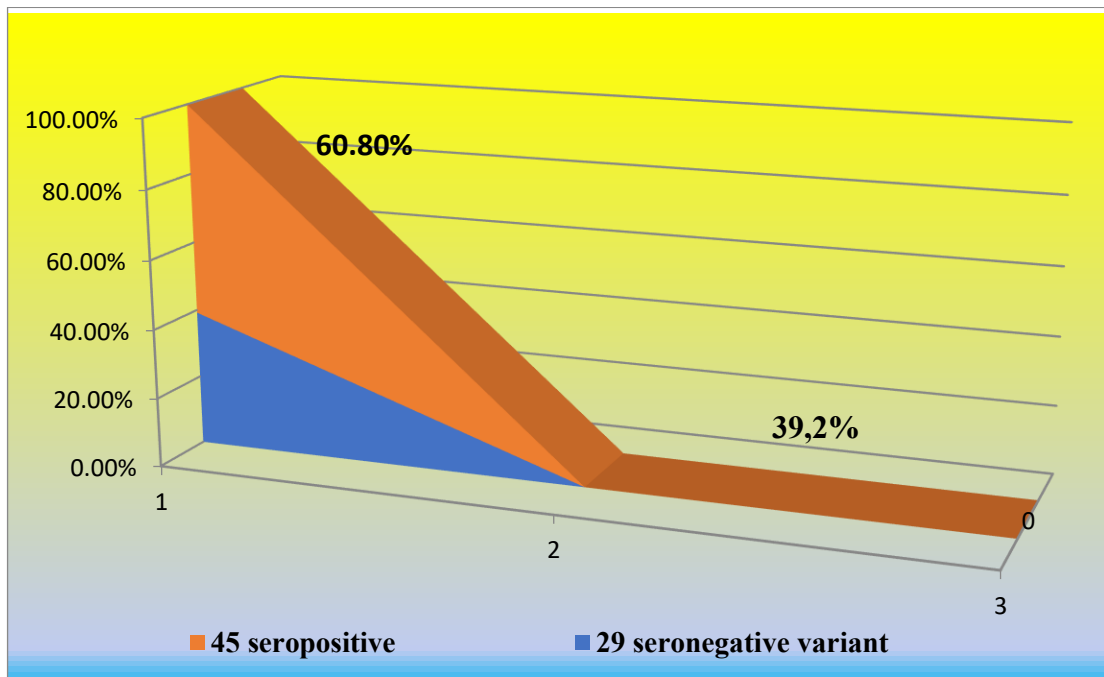
In 70 cases (94.6%), the articular form and 4 cases (5.4%) the visceral form was diagnosed. Based on Valera Rosé reagent and latex test, rheumatoid factor was detected in patients.

3- Chart



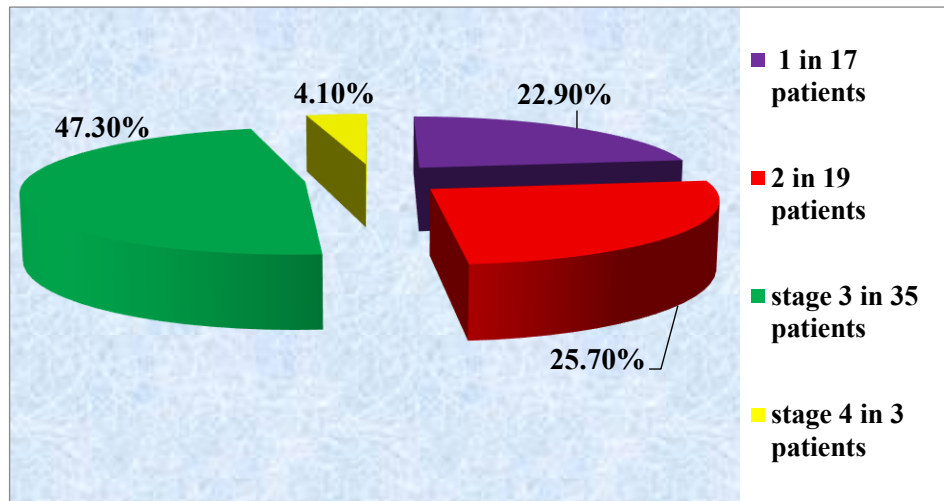
Depending on the positive or negative result of the Russian Federation, 29 patients (39.2%) had a seronegative variant and 45 (60.8%) had a seropositive RA variant.

4- Chart



Radiological examination of RA showed stage 1 in 17 patients (22.9%), stage 2 in 19 patients (25.7%), stage 3 in 35 patients (47.3%) and stage 4 in 3 patients (4.1%).

5- Chart

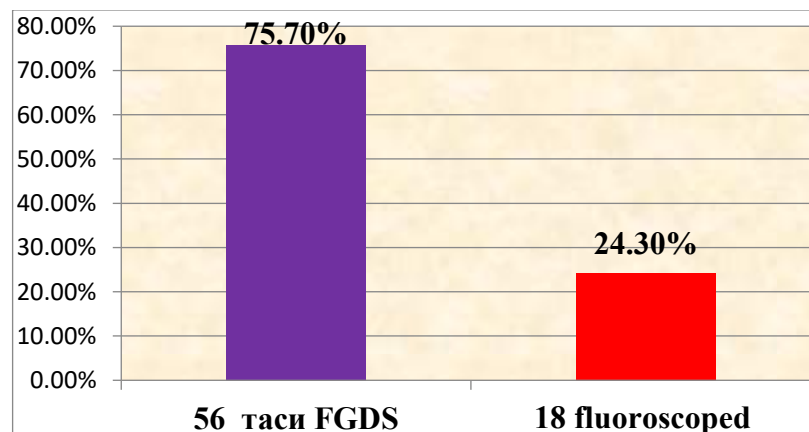


A history of RA patients shows that 3 of 74 patients had cholecystitis (4.1%), peptic ulcer and duodenal ulcer in 2 patients (2.7%), and NSAID gastropathy in 60 patients (81.1%) 9 patients (12.2%) had comorbidities, 22 (29.7%) patients with diseases of the gastrointestinal tract were identified. All patients were treated for the underlying disease. Depending on the received therapeutic procedures, the following groups are defined. 51 (68.9%) patients in the first group took NSAIDs alone, and this was a very effective symptomatic treatment. NSAIDs were selected on an empirical basis. NSAIDs in 23 (45%) patients were co-administered with basic treatment.

Of these, 20 (39.2%) received delagil along with NSAIDs and 3 patients (13.0%) received cuprenil in combination with NSAIDs. The second group included a small group of patients who received complex treatment: these are patients who received NSAIDs, delagil and GCS together, which amounted to 23 patients (31.1%). This indicated a high activity of the rheumatoid process, as well as the development of systemic events. Some patients have been taking these medications on an outpatient basis for some time.

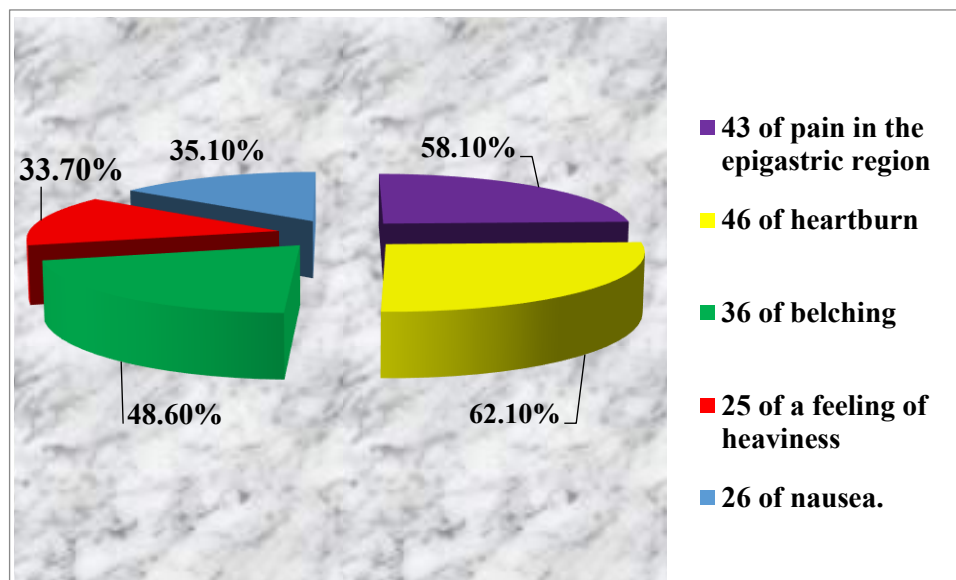
When examining patients, clinical study methods (examination, survey) and the entire complex of laboratory and instrumental studies (general analysis of blood and urine, sialic acids, protein fractions, fibrinogen, urea, radiography of the mucous membranes of the stomach and duodenum), endoscopic examination) are taken into account. In 56 of 74 RA patients examined, a study of FGDS (75.7%) was conducted with the detection of superficial and atrophic changes in the submucosa of the gastrointestinal tract. Of the patients over 60 years old, 18 people refused endoscopic examination (24.3%), and they were fluoroscoped with barium solution to detect changes in the stomach, as a result of which erosive changes and wounds in the stomach were found in all 18 patients.

6- Chart



Among the dyspeptic complaints, symptoms such as a feeling of heaviness in the epigastric region, heartburn, belching, nausea, as well as the presence of heaviness in the stomach region were evaluated. Clinical examination of RA patients with NSAID gastropathy revealed a high incidence of pain and dyspeptic syndromes 43 (58.1%) complained of pain in the epigastric region, 46 (62.1%) - of heartburn, 36 (48.6%) - of belching, 25 (33.7%) - of a feeling of heaviness in the epigastric region 26 (35.1%) - of nausea.

7- Chart



Conclusions

1. When using NSAIDs, clinical features are defined as independent variables (concomitant use of two NSAIDs, ulcer history, presence of smoking and gender), the diagnostic accuracy of the discriminatory model of local analysis is 64.0%, sensitivity - 48.0% and specificity - 80.0%;
2. NSAID risk assessment method - gastropathy, clinically based on discrimination analytical properties (simultaneous use of two NSAIDs, duration of administration, age) and morphological indicator of the gastric mucosa (fundal atrophy), accuracy 78.0%, sensitivity 80.0% and specificity 76.0%.
3. Symptomatic clinical course corresponds to specific endoscopic and morphological signs of antral gastritis activity.

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