



A Way to Prevent Mucosal Damage Gastric Membranes When Taking Nonsteroidal Anti- Inflammatory Drugs for Rheumatoid Arthritis (Review Article)

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Abstract: The invention relates to medicine and can be used to prevent stomach ulcers caused by the use of nonsteroidal anti-inflammatory drugs. Before taking nonsteroidal anti-inflammatory drugs, apply the balm we developed against stomach ulcers for 14 days before meals. The method reduces the likelihood of ulcers of the gastric mucosa when taking nonsteroidal anti-inflammatory drugs.

Keywords: rheumatoid arthritis, gastric ulcer, nonsteroidal anti-inflammatory drugs, balsam.

Rheumatoid arthritis continues to be one of the most relevant pathologies in modern medical practice: on the one hand, this is facilitated by the prevalence of the disease – up to 2% in the general population; on the other hand, the high social and economic significance of the process, based on high rates of persistent disability in patients and the significant cost of treatment and necessary laboratory control [21]. The high prevalence of the disease implies the presence of concomitant pathologies in such patients and, accordingly, a burdened comorbid background, which has a significant impact on the prognosis, therapy tactics and, as a result, the quality of life of patients with rheumatoid arthritis [17].

Functional and morphological changes on the part of the stomach [1,17] and intestines [18], especially the mucous membrane, which can be associated with the pathogenesis of the underlying joint disease, are described. However, the interpretation of these changes is difficult due to the possible side effects of medications that patients are forced to take for years. So, in the literature of recent years, there are more and more works that analyze the effect of nonsteroidal anti-inflammatory drugs (NSAIDs) on the gastric mucosa in patients with rheumatoid arthritis. [4].

By inhibiting the production of prostaglandins, NSAIDs reduce the resistance of the gastric mucosa to the aggressive effects of hydrochloric acid and pepsin lead to the development of gastropathy and gastric ulcers, which in some cases can threaten the lives of patients. The risk of gastrointestinal tract lesions increases with the use of glucocorticosteroids (GCS) and probably long-acting "basic" drugs, in particular immunosuppressants [12]. It is also impossible to exclude the negative effect on the gastric mucosa in patients with RA and the infectious factor — "Helicobact pylori" (Hp), which is currently considered as an important component of the pathogenesis of gastroduodenal lesions [21].

The invention relates to medicine, in particular to the pharmacology of drugs that prevent the formation of erosive and ulcerative lesions of the stomach caused by the use of nonsteroidal anti-inflammatory drugs, which can be used to prevent ulcerative effects in persons who have been using nonsteroidal anti-inflammatory drugs for a long time. It is known that nonsteroidal anti-inflammatory

drugs are one of the main drugs in the treatment of many rheumatic inflammatory diseases. The widespread use of nonsteroidal anti-inflammatory drugs (NSAIDs; NSAIDs) is associated with the presence of a unique set of effects: analgesic, antipyretic and anti-inflammatory [19].

However, the use of nonsteroidal anti-inflammatory drugs has its limitations, which, according to modern concepts, are associated with the main mechanism of their action and are manifested by an increase in the frequency of peptic ulcers and ulcerative complications (gastrointestinal bleeding and perforation of the stomach wall) [17, 22]. Regardless of the localization of the lesion of the mucous membrane of the gastrointestinal tract, the mechanisms of the damaging effect of NSAIDs are the same. They can be divided into two categories.

1. Dependent on the inhibition of various isoforms of the enzyme cyclooxygenase (COX).
2. Direct effect of the drug on the mucous membrane. Currently, it has become obvious that half of serious gastrointestinal bleeding (GCC) is provoked by taking NSAIDs and that thousands of people die from gastroduodenal complications associated with taking these drugs. For example, in 1997, 16,500 patients died from NSAID-induced gastropathies in the USA (data from the National Center for Health Statistics, 1998), which exceeded the number of deaths from socially significant diseases such as asthma or lymphogranulomatosis [2, 4].

Many studies indicate that patients with rheumatic diseases who received NSAIDs die from GCC and perforation of ulcers 2-10 times more often than people who did not take these medications [2,5,6]. Various studies indicate that ulcers are detected in 15-40% of patients who regularly take NSAIDs for at least 6 months. According to the Institute of Rheumatology of the Russian Academy of Medical Sciences for 1996-2004, stomach and duodenal ulcers were detected in 12.9% of cases among patients with various rheumatic diseases who took NSAIDs [22]. The development of NSAID-induced ulcers may not be accompanied by pronounced arthralgias and dyspeptic phenomena, and in some cases be asymptomatic [19, 20].

Currently, the prevention and treatment of NSAID-dependent injuries of the gastrointestinal tract is reduced to the appointment of histamine receptor H₂ antagonists (ranitidine, famotidine), proton pump inhibitors (omeprazole, lansoprazole), reducing the secretion of hydrochloric acid, the use of synthetic analogues of prostoglandin (misoprostol), providing the production of protective mucus and bicarbonates, as well as the appointment of preparations of colloidal subcitrate and bismuth subgallate (de nol, tribimol, bismofalk, ventrisol) and antacids [13,14].

However, it has been established that H₂-histamine receptor inhibitors, topical bismuth preparations, antacids are not effective enough in the treatment and prevention of stomach ulcers in people taking nonsteroidal anti-inflammatory drugs for a long time [13, 14]. The use of a synthetic analogue of prostaglandin E (misoprostol) is limited by a large number of side effects: diarrhea, dyspeptic syndrome, decreased blood pressure, facial hyperemia, headaches, which occur with a frequency of up to 25%.

Of all the listed drugs, proton pump inhibitors are considered the most effective. However, in the treatment and prevention of NSAID-dependent damage to the gastric mucosa, especially with prolonged use of NSAIDs, their effectiveness decreases. In addition, the effectiveness of proton pump inhibitors decreases with localization of mucosal lesions in the stomach and the absence of *H.pylori* [1,2]. In addition, drugs that reduce the acidity of gastric juice (H₂-histamine receptor blockers, proton pump inhibitors, antacids), with their prolonged use, increase intragastric pH and can cause disruption of digestive processes, which is manifested by the clinical picture of dyspeptic syndrome.

However, the presence of side effects (flatulence, intestinal dyskinesia) when using calcium lactate in effective doses limits its use. The objective of the invention is to expand the arsenal of effective medicines designed to prevent damage to the gastric mucosa induced by nonsteroidal anti-inflammatory drugs. The technical result is that it is quite simple to implement, allows for preventive measures to prevent stomach ulcers both in hospital and on an outpatient basis without the use of special equipment and inventory, there are no side effects. [6].

The balm developed by us was called Anti-ulcerative Balm. Novocaine 1%, aloe juice, honey and sea buckthorn oil. The technical result is achieved by the fact that the method of preventing damage to the gastric mucosa when taking nonsteroidal anti-inflammatory drugs and hormones includes oral use of a balm made by us, 1 h / 1 spoon 3-4 times a day the duration of the appointment is 14 days before taking nonsteroidal anti-inflammatory drugs. The enteral application of this balm corresponding to the therapeutic range is well tolerated by the body and is characterized by the absence of side effects. Aloe has pronounced wound-healing properties, acts as a bacteriostatic, strengthens local and general immunity, and replenishes vitamin deficiency in the body. The effect of honey in gastric ulcer and duodenal ulcer is scarred, we can determine this by X-ray examination of the gastrointestinal tract, the result of patients showed that with conventional methods, the ulcer is scarred in every third patient, and with the use of honey — in every second.

Sea buckthorn oil has not only an anti-inflammatory, but also a wound-healing effect. Helps to get rid of stomach ulcers. The carotenoids in the oil are processed into vitamin A in the body, which helps to reduce the inflammatory process. Novocaine blocks the ion channels of the cell membrane and does not affect the acidity of gastric juice.

Literatures

1. Brooks J., Wardurton R., Beales I.L., Prevention of upper gastrointestinal haemorrhage: current controversies and clinical guidance // *Ther. Adv. Chronik Dis.* – 2013. – Vol. 4, No. 5. – P. 206-222.
2. Chan F.K. Review article: Prevention of non-steroidal antiinflammatory drug gastrointestinal complications - review and recommendations based on risk assessment / F.K.Chan, D.Y.Graham // *Aliment. Pharmacol. Ther.* - 2004. - Vol.19, N10. - P.1051-1061.
3. Chan F.K., Leung W.K. Peptic ulcer disease / F.K.Chan, W.K.Leung // *Lancet.* - 2002. Vol.360. - P.933-941.
4. Fries J.F., Murtagh K.N., Bennett M et al. The rise and Decline of nonsteroidal anti-inflammatory drugs-associated gastropathy in rheumatoid arthritis // *Arthritis Rheum.* – 2004. – Vol. 50, No. 8. – P. 2433-2440.
5. Garcia Rodnges L.A. Assotiation between aspirin and upper gastrointestinal complications: systematic review of epidemiologic studies / L.A.Garcia Rodnges, S.Hernandez-Diaz, F.L.De Abajo // *Br. J. Clin. Pharmacol.* - 2001. - Vol.52. - P.563-571.
6. Henry D. Variability in risk of gastrointestinal complications with individual nonsteroidal anti-inflammatory drugs: results of a collaborative metaanalysis / D.Henry, L.L.Y.Lim, L.A.Garcia Rodrfges // *B.M.J.* - 1996. - Vol.312. - P.1563-1566.
7. Langman MJ.S. Risks of bleeding peptic ulcer associated with individual non-steroidal antiinflammatory drugs / MJ.S.Langman, J.Weil, P.Wainwright // *Lancet.* - 1994. - Vol.343. - P.10751078.
8. Micklewright R. Review article: NSAIDs, gastroprotection and cyclooxygenase-2-selective inhibitors / R.Micklewright, S.Lane, W.Linley // *Aliment. Pharmacol. Ther.* - 2003. - Vol.17. P.321-332.
9. Osiri M., Sattayasomboon Y. Prevalence and outpatient medical costs of comorbid cnditions in patients with rheumatoid arthritis // *Joint Bone Spine.* – 2013. – № 6 (80). – P. 608–620 Vol. 15, Suppl 3. – P. 3.
10. Wolfe M.M. Gastrointestinal toxicity of nonsteroidal antiin flammatory drugs / M.M.Wolfe, D.R.Lichtenstein, G.Singh // *N. Eng. J. Med.* - 1999. - Vol.340. - P.1888-1899.
11. Silverstein F.E. Misoprostol reduces serious gastrointestinal complications in patients with rheumatoid arthritis receiving non-steroidal anti-inflammatory drug: A randomized, doubleblind, placebo-controlled trial / F.E.Silverstein, D.Y.Graham, J.R.Senior // *Ann. Intl. Med.* 1995. - Vol.123. - P.241-249.

12. Drozdov.B.H.Gastropathies caused by nonsteroidal anti-inflammatory drugs: pathogenesis, prevention and treatment/ V.N.Drozdov//Gastroenterology (appendix to the journal CONSILIUM MEDICUM): electron, journal. - - 2005. -Vol.7, No. 1. - URL: http://old.consiliummedicum.com/media/gastro/05_01/3.shtml (accessed 27.10.2010).
13. Wolfe M.M. Gastrointestinal toxicity of nonsteroidal antiin flammatory drugs / M.M.Wolfe, D.R.Lichtenstein, G.Singh // N. Eng. J. Med. - 1999. - Vol.340. - P.1888-1899.
14. Yeomans N.D. Comparison of omeprazole with ranitidine for ulcers associated with nonsteroidal anti-inflammatory drugs / N.D.Yeomans, Z.Tulassay, L.A.Juhasz // N. End. J. Med. 1998. - Vol.338. - P.719-725.
15. Basic and clinical pharmacology: in 2-ht.Volume 1 /edited by B.G.Katzunga; sangl lane.subreddit.E.E.Zvartau. -M.; SP b.:Binom;NevskiyDialect, 1998. - 612s.
16. Gatsura V.V. Methods of primary pharmacological research of biologically active substances/V.V.Gatsura. -M.:Medicine, 1974. - 143s.
17. Karateev A.E. The problem of NSAID-induced gastropathy:past and present/A.E.Karateev, V.A.Nasonova//Diseases of the digestive system (appendix BC). - 2004. -Vol.6, No. 1. -pp.36-43.
18. Mashkovsky M.D.Medicinal products/M.D.Mashkovsky. - 16-ed., reprint,ispr.idop. - M.:Novayavolna, 2010. - 1216s.
19. Nasonov E.L. The use of nonsteroidal anti-inflammatory drugs. Clinical recommendations /E.L.Nasonov, A.E.Karateev// Russian Medical Journal. - 2006. -Vol.14, No.25. -pp.1769-1777.
20. Nasonov E.L. The use of nonsteroidal anti-inflammatory drugs and cyclooxygenase-2 inhibitors at the beginning of the XXI century/E.L.Nasonov//Russian Medical Journal. - 2003. - T.11, No. 7. -pp.375-378.
21. Nasonov E.L., Karateev D.E., Chichasova N.V. EULAR recommendations for the treatment of rheumatoid arthritis – 2013: general characteristics and debatable problems // Scientific and practical rheumatology. – 2013. – № 6 (51). – Pp. 609-631.
22. Guidelines for the experimental (preclinical) study of new pharmacological substances/ [sub-ed. by R.U.Khabriev]. - 2nd ed. -M.:Medicine, 2005. - 832s.
23. Ilkhomovna K. D. Morphological Features of Tumor in Different Treatment Options for Patients with Locally Advanced Breast Cancer //International Journal of Innovative Analyses and Emerging Technology. – 2021. – T. 1. – №. 2. – C. 4-5.
24. Khodzhaeva D. I. Changes in the Vertebral Column and Thoracic Spinecells after Postponement of Mastoectomy //International Journal of Innovative Analyses and Emerging Technology. – 2021. – T. 1. – №. 4. – C. 109-113.
25. Khodjayeva D. I. MORPHOLOGY OF IDIOPATHIC SCOLIOSIS BASED ON SEGMENT BY SEGMENT ASSESSMENT OF SPINAL COLUMN DEFORMITY //Scientific progress. – 2022. – T. 3. – №. 1. – C. 208-215.
26. Ilkhomovna K. D. Modern Look of Facial Skin Cancer //BARQARORLIK VA YETAKCHI TADQIQOTLAR ONLAYN ILMIY JURNALI. – 2021. – T. 1. – №. 1. – C. 85-89.
27. Ходжаева Д. И. Современные возможности ультразвуковой диагностики рака кожи лица //Вопросы науки и образования. – 2021. – №. 25 (150). – С. 21-24.
28. Aslonov S. G. et al. Modern Approaches to Oropharyngeal Cancer Therapy //International Journal of Discoveries and Innovations in Applied Sciences. – 2021. – T. 1. – №. 3. – C. 38-39.
29. Khodjayeva D. I. MORPHOLOGY OF IDIOPATHIC SCOLIOSIS BASED ON SEGMENT BY SEGMENT ASSESSMENT OF SPINAL COLUMN DEFORMITY //Scientific progress. – 2022. – T. 3. – №. 1. – C. 208-215.

30. Khodjaeva D. I. Magnetic-resonance imaging in the diagnosis of breast cancer and its metastasis to the spinal column //Scientific progress. – 2021. – T. 2. – №. 6. – C. 540-547.
31. Ilkhomovna K. D. MANIFESTATIONS OF POST-MASTECTOMY SYNDROME, PATHOLOGY OF THE BRACHIAL NEUROVASCULAR BUNDLE IN CLINICAL MANIFESTATIONS //Innovative Society: Problems, Analysis and Development Prospects. – 2022. – C. 225-229.
32. Khodzhaeva D. I. Modern Possibilities of Ultrasounddiagnostics of Skin Cancer //IJTIMOIY FANLARDA INNOVASIYA ONLAYN ILMIY JURNALI. – 2021. – T. 1. – №. 1. – C. 101-104.
33. Ilkhomovna K. D. Modern Look of Facial Skin Cancer //BARQARORLIK VA YETAKCHI TADQIQOTLAR ONLAYN ILMIY JURNALI. – 2021. – T. 1. – №. 1. – C. 85-89.
34. Idiyevna S. G. Discussion of results of personal studies in the use ofmil therapy in the treatment of trauma to the oral mucosA //European Journal of Molecular medicineVolume. – T. 2.
35. Idiyevna S. G. THE EFFECTIVENESS OF THE USE OF MAGNETIC-INFRARED-LASER THERAPY IN TRAUMATIC INJURIES OF ORAL TISSUES IN PRESCHOOL CHILDREN //Academic leadership. ISSN. – T. 15337812.
36. Sharipova G. I. Light and laser radiation in medicine //European journal of modern medicine and practice. – 2022. – T. 2. – №. 1. – C. 36-41.
37. Idievna S. G. THE EFFECT OF DENTAL TREATMENT-PROFILACTICS ON THE CONDITION OF ORAL CAVITY ORGANS IN CHILDREN WITH TRAUMATIC STOMATITIS //Tibbiyotdayangikun» scientific-abstract, cultural and educational journal.- Bukhara. – 2022. – T. 5. – №. 43. – C. 103-106.
38. Idievna S. G. CHANGES IN THE CONTENT OF TRACE ELEMENTS IN THE SALIVA OF PATIENTS IN THE TREATMENT OF PATIENTS WITH TRAUMATIC STOMATITIS WITH FLAVONOID-BASED DRUGS //Journal of research in health science. – T. 6. – C. 23-26.