UDC: 616.33/.34-036

ETIOPATHOGENESIS OF ACUTE HEMORRHAGIC GASTRODUODENAL ULCERS


Daminov Feruz Asadullaevich, Bobokulov Azamat Uktamovich
Samarkand State Medical University, Republic of Uzbekistan, Samarkand

ЎТКИР ГЕМОРРАГИК ГАСТРОДУОДЕНАЛ ЯРАЛАРНИНГ ЭТИОПАТОГЕНЕЗИ

Даминов Феруз Асадуллаевич, Бобокулов Азамат Уктамович
Самарқанд давлат тиббиёт университети, Ўзбекистон Республикаси, Самарқанд ш.

ЭТИОПАТОГЕНЕЗ ОСТРЫХ ГЕМОРРАГИЧЕСКИХ ГАСТРОДУОДЕНАЛЬНЫХ ЯЗВ

Даминов Феруз Асадуллаевич, Бобокулов Азамат Уктамович
Самаркандский государственный медицинский университет, Республика Узбекистан, г. Самарканд

e-mail: info@sammu.uz

Резюме. *Ушбу мақола замонавий тиббиёт ва жарроҳликнинг асосий муаммоларидан бири бўлган гастродуоденал қон кетишларнинг ривожланиш омилларига бағишланган. Мақолада меъда ва ўн икки бармоқ ичак яра касаллигидан қон кетиш сабаблари, уларнинг ривожланиши, консерватив даволашдаги этиоатогенетик ёндашувлар ҳақида умумий маълумот берилган.*

Калит сўзлар: *меъда ва ўн икки бармоқ ичак яраси, Helicobacter pylori, қон кетиш, НЯҚП.*

Abstract. *The article is devoted to the factors contributing to the development of gastroduodenal bleeding, which is one of the main problems of modern medicine and surgery. The article provides general information about the causes of bleeding from gastric and duodenal ulcers, the features of their development, etiopathogenetic approaches to conservative treatment.*

Key words: *gastric and duodenal ulcer, Helicobacter pylori, bleeding, NAID.*

Bleeding from gastric and duodenal ulcers is one of the most dangerous complications, occurring in 15-20% of all complications. According to the latest data [5, 18], the incidence of gastroduodenal bleeding is constantly observed throughout the world, occurring in 40 to 130 cases per 100 thousand population and has a stable trend. The main (35-58%) cause of acute gastroduodenal bleeding is gastric and duodenal ulcer. The majority of such patients are aged 22-45 years, and various conditions and pathologies observed in them (stress, excessive fatigue, consumption of various carbonated and high-calorie drinks, medication, etc.) can lead to the development of gastric and duodenal ulcers and the occurrence of bleeding complications. The second category of patients by age includes the elderly. They are mainly observed in cases of taking anticoagulants, antiplatelet agents and their analogues for preventive purposes, mainly due to the occurrence of cardiovascular pathologies. As is known, anticoagulant and antiplatelet therapy play a key role in the prevention of cardiovascular diseases (arterial hypertension, atherosclerosis, ischemic heart disease).

At the same time, according to many sources [1, 9, 23], instead of taking anticoagulant and antiplatelet therapy regularly, without following the exact dosages and indications, there are often cases of taking them haphazardly, the main complication of which is the frequent development of hemorrhagic complications in patients prone to bleeding.

Currently, the main antiplatelet drugs include cyclooxygenase (COX) inhibitors (aspirin, i.e. acetylsalicylic acid), adenosine diphosphotase (ADP) receptor blockers (ticlopidine, clopidogrel, glycoprotein IIIa/IIb receptor blockers - tirofiban, abciximab, etc.). The "oldest" and most widely used drug among them is aspirin, which belongs to the salicylic acid derivatives. It blocks platelet cyclooxygenase and, as a result, blocks the synthesis of the monoinducer of platelet aggregation.

According to studies conducted by the Antithrombotic Research Collaboration [12, 17], patients who received acetylsalicylic acid for 12 years and were followed for 23% less than patients with other cardiovascular diseases (acute coronary syndrome, myocardial infarction, acute cerebrovascular accidents) died.

Despite the above-mentioned effectiveness of aspirin, it also has other weak points. For example, it inhibits the activation of platelets by inhibiting cyclooxygenase and the formation of thromboxane A2. However, this mechanism is not enough to solve the problems of all patients with cardiovascular diseases. One of the most dangerous aspects of aspirin is its ability to irritate the mucous membrane of the stomach and other organs of the digestive tract. We know that the synthesis of

prostaglandin E in the gastric mucosa leads to a strengthening of its protective shell. Acetylsalicylic acid reduces the activity of cyclooxygenase enzymes, leading to erosion of the gastric mucosa and an increased risk of bleeding complications [4, 15]. Another representative of antiplatelet agents are ADP receptor antagonists (clopidogrel, ticagrelor, ticlopidine). They are antagonists of ADP receptor activators that promote platelet aggregation. The most widespread representative of them is Clopidogrel. Like other representatives of this group, it is a prodrug, and metabolites with antiplatelet activity are formed in the liver. According to the recommendations of many world scientists [8, 21], if there are contraindications to taking aspirin or its analogues due to various pathologies of the gastrointestinal tract, the most preferred drug for such patients is Clopidogrel. However, according to other data [10, 14], clopidogrel itself is not recommended as an antiplatelet agent and is considered appropriate to use as a complex therapy in combination with other anticoagulants. Ticagrelor is another modern type of ADP receptor antagonists, which increases the local endogenous adenosine concentration in the body and has functions such as vasodilation, cardioprotection, inhibition of platelet aggregation and modulation of inflammatory processes. [20].

In studies conducted by PEGASUS [6, 19], the combined combination of ticagrelor 60 mg and aspirin, when administered 2 times a day, plays a significant role in preventing antithrombotic complications in various patients, regardless of age, body weight, location and various comorbidities. However, it cannot be used together with drugs such as erythromycin, clarithromycin, fluconazole, cyclosporine. Therefore, it causes problems in the use of anti-Helicobacter therapy for gastric and duodenal ulcers. Therefore, it causes problems in the use of anti-Helicobacter therapy for gastric and duodenal ulcers. According to Jensen B.E. [2, 25], this limitation significantly narrows the therapeutic window for patients who require both eradication therapy for Helicobacter pylori infection and effective antiplatelet management. As a result, in patients with high cardiovascular risk and a history of gastrointestinal complications, a delicate balance must be maintained between the antithrombotic benefit and the gastrointestinal safety profile.

In this context, proton pump inhibitors (PPIs) such as omeprazole and pantoprazole are often co-prescribed with antiplatelet agents to minimize the risk of gastrointestinal bleeding. However, several studies [11, 16, 22] have pointed out that certain PPIs, particularly omeprazole, may interfere with the metabolic activation of clopidogrel through the cytochrome P450 system, especially CYP2C19, thereby reducing its antiplatelet efficacy. This has led to ongoing discussions regarding the choice of gastroprotective agents in such clinical scenarios, with pantoprazole emerging as a more suitable alternative due to its lesser impact on CYP-mediated metabolism.

Moreover, the problem of gastrointestinal bleeding is further exacerbated in elderly patients, as age-related mucosal atrophy and the frequent use of polypharmacy in this population increase their susceptibility to mucosal injury and hemorrhagic complications [13, 24]. Similarly, in pediatric cases, although ulcerative lesions are rarer, when present they tend to be more aggressive, with a higher likelihood of rapid decompensation due to smaller blood volumes and less physiological reserve [3, 7].

Given these considerations, risk stratification remains essential. Tools such as the Rockall and Glasgow-Blatchford scoring systems are widely used to predict outcomes and guide the management of upper gastrointestinal bleeding [22, 23]. However, these tools primarily assess bleeding severity rather than etiology, and thus may need adaptation or supplementation when applied in the context of chronic antiplatelet therapy.

Conclusion. The management of gastroduodenal ulcer bleeding in patients on antiplatelet therapy, especially in vulnerable populations such as children and the elderly, remains a clinical challenge. While aspirin and newer ADP receptor antagonists like clopidogrel and ticagrelor offer significant cardioprotective benefits, they also carry considerable gastrointestinal risks. Rational drug selection, careful patient monitoring, and the use of gastroprotective co-therapy are key strategies to reduce complications. Future studies are needed to further elucidate safer and more individualized approaches for antiplatelet therapy in patients with existing or potential gastrointestinal pathologies.

Literature:

1. Allahverdyan A.S. Resection of the proximal part of the stomach and the chest part of the stomach with cardioesophageal cancer combined with laparotoracoscopy. Nekotorye osobennosti i blijayshie resultaty: nauchnoe izdanie / A.S. Allakhverdyan // Endoscopic surgery. - 2016. - Volume 22, N3. - S. 3-5.
2. Achilov M.T., Akhmedov G.K., Alimov J.I. Gastrectomy pri jeludochnyx krovotecheniyax. // "Science and peace". No. 7 (83), 2020, pp. 62-65.
3. Daminov F.A., Bobokulov A.U. Pathogenetic factors of gastroduodenal bleeding. // Problems of biology and medicine 2024 #4 (155). S. 390-392.
4. Zatsepina E. A. i dr. Opyt successful performance of laparoscopic sleeve resection of the stomach for the treatment of morbid obesity in a patient with congenital dysfunction of the kidney. // Problemy endocrinologii: two-month scientific and practical journal. - 2023. - Volume 69, N 3. - S. 83-89.
5. Ivanov Yu. V., Stankevich V. R., Epifantsev E. A. [i dr.]. Gastric-pleural fistula, oslojnennyy levostoronney empiemoy plevry posle laparoscopicheskoy operatsii gastroshuntirovaniya // Endoskopicheskaya khirurgiya: nauchno-prakticheskiy zurnal. - 2023. - Volume 29, N 6. - S. 98-102.
6. Nazirov F. G. Prognosis oslojneniy/polzy laparoscopicheskoy rukavnoy rezektsii zhuldka u pasatitov s morbidnym ojireniem po universalnomu bariatriceskomu kalkulyatoru BSRBC: Materialy XXV Republican scientific-practical conference "Vakhidovskie chteniya - 2021" "Novye tendentsii v mini-invasive thoraco-abdominal and cardiovascular surgery" (Tashkent, April 23, 2021 1) / F. G. Nazirov, Sh. X. Hashimov, U. M. Makhmudov // Chirurgiya Uzbekistana: scientific and practical journal. - 2021. - N 1. - S. 60.
7. Ospanov O. B. Comparison of the results of the mass body and the probability of the oslojneni posle besplernogo i steplernogo laparoscopicheskogo gastroshuntirovaniya pri morbidnom ojirenii: nauchnoe izdanie / O. B. Ospanov,

G. A. Eleuov // Endoscopic surgery: scientific and practical journal. - 2019. - Volume 25, N 5. - S. 26-30.
8. Rizaev J. A., Nazarova N. S., Vohidov E. R. Homilador ayollarda parodont kasalliklari rivojlanishining patogenetik jihatlari //Журнал гуманитарных и естественных наук. – 2024. – №. 11 [2]. – С. 104-107.
9. Rizaev J. A., Ruzimurotova Y. S., Khaydarova G. A. The impact of social and health factors at work and at home on nurses'health //Вестник магистратуры. – 2022. – №. 2-1 (125). – С. 10-12.
10. Stilidi I. S. i dr. Distal duodenal resection: novyy sposob hirurgicheskogo lecheniya pri poukholemov porajenii dvenadtsatiperstnoy kishki. // Surgery. The name of the magazine is N. I. Pirogova: scientific and practical review magazine. - 2019. - N 9. - S. 5-12.
11. Toshkenboev F.R., Gulamov O.M., Akhmedov G.K., Sherkulov K.U. Primenenie maloinvasivenyx operation pri malignizirovannyx zvax zhudka. // Journal hepatogastroenterological issledovaniy. #1. 2024. S. 44-47.
12. Toshkenboev F.R., Gulamov O.M., Akhmedov G.K., Toirov A.S. Complications of bariatric operations performed on the stomach. // Problems of biology and medicine. #3. 2024. S. 441-444.
13. Turaeva M., Khudaynazarov U.R., Akhmedov G.K. Effektivnost korrektsii tkanevoy hypoksii pri yazvennyx gastroduodenalnyx krovotecheniyax. // "Aktualnye problemy sovremennoy meditsiny" materialy 72-y conference. Samarkand-2018. Str. 56.
14. Fishman M. B. Longitudinal resection of the stomach. Rol i mesto v bariatric surgery: scientific study / M. B. Fishman, W. M. Sedov, Yan Van // Vestnik khirurgii im. I.I. Grekova. - 2016. - Volume 175, N4. - S. 19-23.
15. Butti F, Vanoni-Colombo A, Djafarrian R, Allemann P, Calmes JM, Fournier P. Roux-en-Y Gastric Bypass with Manual Intracorporeal Anastomoses in 3D Laparoscopy: Operative Technique. J Laparoendosc Adv Surg Tech A. 2020 Aug; 30(8):879-882. doi: 10.1089/lap.2020.0098. Epub 2020 May 14. PMID: 32407156.
16. Fujimoto D, Taniguchi K, Kobayashi H. Double-Tract Reconstruction Designed to Allow More Food Flow to the Remnant Stomach After Laparoscopic Proximal Gastrectomy. World J Surg. 2020 Aug;44(8):2728-2735. doi: 10.1007/s00268-020-05496-0. PMID: 32236727.
17. Gulamov O.M., Ahmedov G.K., Khudaynazarov U.R., Saidullayev Z.Ya. Diagnostic and treatment tactics in gastroesophageal reflux disease. // Texas Journal of Medical Science Date of Publication: 18-03-2022. A Bi-Monthly, Peer Reviewed International Journal. Volume 6. P. 47-50.
18. Jones MW. Simple Instrument Modification to Aid in Laparoscopic GastricWraps for Posterior Fundoplications. JSLS. 2023 Jan-Mar;27(1):e2022.00090. doi: 10.4293/JSLS.2022.00090. PMID: 37009063; PMCID: PMC10065755.
19. Kaplan K, Turgut E, Okut G, Bag YM, Sumer F, Kayaalp C. Helicobacter pylori Increases Gastric Compliance on Resected Stomach After Laparoscopic Sleeve Gastrectomy. Obes Surg. 2021 Nov;31(11):4776-4780. doi: 10.1007/s11695-021-05616-2. Epub 2021 Aug 3. PMID: 34345956.
20. Makhsudov M.T., Akhmedov G.K., Gulamov O.M., Khudaynazarov U.R, Dusiyarov M.M. The Use Of A Diode Laser In The Complex Treatment Of Various Pathological Changes In The Mucous Membrane Of The Esophagus. // American Journal of Interdisciplinary Research and Development ISSN Online: 2771-8948. Volume 15, April, 2023. P. 174-179.
21. Matsukubo M, Kaji T, Onishi S, Harumatsu T, Nagano A, Matsui M, Murakami M, Sugita K, Yano K, Yamada K, Yamada W, Muto M, Ieiri S. Differential gastric emptiness according to preoperative stomach position in neurological impaired patients who underwent laparoscopic fundoplication and gastrostomy. Surg Today. 2021 Dec;51(12):1918-1923. doi: 10.1007/s00595-021-02274-w. Epub 2021 Mar 30. PMID: 33786644.
22. Rothenberg KA, Palmer BJ, Idowu O, Kim S. Laparoscopic Magnet-Assisted Percutaneous Endoscopic Gastrostomy Placement. J Laparoendosc Adv Surg Tech A.2019 Mar; 29 (3):430-432. doi: 10.1089/lap.2018.0343. Epub 2018 Nov 8. PMID: 30407112.
23. Saitua F, Weibel A, Herrera P. Gastrostomy: A percutaneous laparoscopictechnique. J Pediatr Surg. 2019 Oct; 54(10):2182-2186. doi:10.1016/j.jpedsurg.2019.06.002. Epub 2019 Jun 16. PMID: 31280878.
24. Temirovich, A. M., Keldibaevich, A. G., Inoyatovich, N. S., Shonazarovich, S. I., &Ochilovich, M. F. (2022). Features of diagnostics and surgical tactics for Hiatal hernias. International Journal of Health Sciences, 6(S2), 6029–6034.
25. Toshkenboyev F.R., Gulamov O.M., Ahmedov G.K. Types and Complications of Gastric Resection Operas // International Journal of Alternative and Contemporary Therapy. IJACT, Volume 2, Issue 6, 2024, 149-153.

ЭТИОПАТОГЕНЕЗ ОСТРЫХ ГЕМОРРАГИЧЕСКИХ ГАСТРОДУОДЕНАЛЬНЫХ ЯЗВ

Даминов Ф.А., Бобокулов А.У.

Резюме. *Статья посвящена факторам, способствующим развитию гастродуоденального кровотечения, которое является одной из основных проблем современной медицины и хирургии. В статье даны общие сведения о причинах возникновения кровотечений из язв желудка и двенадцатиперстной кишки, особенностях их развития, этиопатогенетических подходах к консервативному лечению.*

Ключевые слова: *язва желудка и двенадцатиперстной кишки, Helicobacter pylori, кровотечение, НПВП.*