IQRO JURNALI , IQRO JOURNAL, ИКРО ЖУРНАЛИ
ISSN:2181-4341| wordlyknowledge.uz/index.php/iqro
Volume 22 Issue 02 IYUL 2026

ONKOLOGIK BEMORLARDA KIMYOTERAPIYADAN KEYINGI KO'NGIL AYNISHI VA QUSISHNI BARTARAF ETISHNING ZAMONAVIY SXEMALARI

Ismoilova Gulruh Ulug‘bek qizi
Onkologiya va tibbiy radiologiya yo’nalishi
1-kurs ordinatori CAMU
https://doi.org/10.5281/zenodo.21260134

Annotatsiya. Kimyoterapiya bilan bog‘liq ko‘ngil aynishi va qusish (Chemotherapy-Induced Nausea and Vomiting — CINV) onkologik bemorlarning hayot sifatini sezilarli darajada pasaytiruvchi eng muhim nojo‘ya ta'sirlardan biridir. So‘nggi yillarda antiemetik terapiya bo‘yicha xalqaro tavsiyalar yangilanib, 5-NT3 retseptor antagonistlari, NK1 retseptor antagonistlari, deksametazon hamda olanzapin asosidagi kombinatsiyalangan davolash sxemalari keng qo‘llanila boshlandi. Ushbu maqolada kimyoterapiyadan keyingi ko‘ngil aynishi va qusishning rivojlanish mexanizmlari, xavf omillari, zamonaviy profilaktika va davolash sxemalari hamda ularning klinik samaradorligi tahlil qilinadi. Tadqiqot natijalari zamonaviy antiemetik protokollarni individual xavf omillarini hisobga olgan holda qo‘llash CINV nazoratini yaxshilashi, bemorlarning davolanishga sodiqligini oshirishi va hayot sifatini sezilarli darajada yaxshilashini ko‘rsatadi.
Kalit so‘zlar: kimyoterapiya, ko‘ngil aynishi, qusish, CINV, antiemetik terapiya, 5-NT3 antagonistlari, NK1 antagonistlari, olanzapin, deksametazon, onkologik bemor.

Аннотация. Тошнота и рвота, вызванные химиотерапией (Chemotherapy-Induced Nausea and Vomiting — CINV), остаются одними из наиболее распространённых и клинически значимых осложнений противоопухолевого лечения, существенно ухудшающих качество жизни пациентов. Современные международные рекомендации предусматривают применение комбинированной противорвотной терапии с использованием антагонистов 5-НТ3-рецепторов, антагонистов NK1-рецепторов, дексаметазона и оланзапина. В статье рассмотрены современные представления о патогенезе CINV, факторах риска, современных схемах профилактики и лечения, а также их клинической эффективности. Анализ литературных данных показывает, что персонализированный выбор антиэметической терапии позволяет значительно повысить эффективность контроля CINV, улучшить переносимость химиотерапии и качество жизни онкологических пациентов.
Ключевые слова: химиотерапия, тошнота, рвота, CINV, антиэметическая терапия, антагонисты 5-НТ3, антагонисты NK1, оланзапин, дексаметазон, онкологические пациенты.

Abstract. Chemotherapy-induced nausea and vomiting (CINV) remains one of the most distressing adverse effects of anticancer treatment, significantly reducing patients' quality of life and adherence to chemotherapy. Recent international clinical guidelines recommend risk-adapted antiemetic prophylaxis using combinations of 5-hydroxytryptamine type 3 (5-HT3) receptor antagonists, neurokinin-1 (NK1) receptor antagonists, dexamethasone, and olanzapine. This article reviews the current understanding of the pathophysiology of CINV, associated risk factors, and modern prevention and treatment strategies. The available evidence indicates that individualized antiemetic regimens substantially improve CINV control, enhance treatment adherence, and improve the overall quality of life of oncology patients.

Keywords: chemotherapy, nausea, vomiting, chemotherapy-induced nausea and vomiting, CINV, antiemetic therapy, 5-HT3 receptor antagonists, NK1 receptor antagonists, olanzapine, dexamethasone, oncology.

Kimyoterapiya zamonaviy onkologik kasalliklarni davolashning asosiy usullaridan biri hisoblanadi. So‘nggi yillarda o‘smalarga qarshi dori vositalarining samaradorligi sezilarli darajada oshgan bo‘lsa-da, ularning nojo‘ya ta’sirlari, ayniqsa kimyoterapiya bilan bog‘liq ko‘ngil aynishi va qusish (Chemotherapy-Induced Nausea and Vomiting — CINV) klinik amaliyotning dolzarb muammolaridan biri bo‘lib qolmoqda. Yetarli antiemetik profilaktika o‘tkazilmaganda CINV bemorlarning 70–90 % ida kuzatilishi mumkin, bu esa davolashga sodiqlikning pasayishiga, organizmning suvsizlanishiga, elektrolitlar muvozanatining buzilishiga, ovqatlanish holatining yomonlashishiga va hayot sifatining keskin pasayishiga olib keladi.

CINV patogenezi murakkab bo‘lib, markaziy va periferik nerv tizimi, serotonin (5-HT3), neyrokinin-1 (NK1), dopamin, gistamin va boshqa mediatorlarning o‘zaro ta’siri bilan bog‘liq. Klinik jihatdan CINV o‘tkir (kimyoterapiyadan keyingi dastlabki 24 soat ichida), kechikkan (24–120 soat), kutiluvchi (anticipatory), refrakter va «breakthrough» turlariga ajratiladi. Har bir tur uchun profilaktika va davolash yondashuvlari bir-biridan farq qiladi. So‘nggi o‘n yillikda antiemetik terapiya sohasida muhim yutuqlarga erishildi. Xalqaro tavsiyalar yuqori va o‘rta emetogen xavfga ega kimyoterapiya rejimlarida 5-HT3 retseptor antagonistlari, NK1 retseptor antagonistlari, glyukokortikosteroidlar hamda olanzapinni kombinatsiyalangan holda qo‘llashni tavsiya etadi. Individual xavf omillari, jumladan ayol jinsi, yosh, avvalgi homiladorlik toksikozi, alkogol iste’mol qilmaslik va avvalgi kimyoterapiya sikllarida CINV kuzatilganligi ham antiemetik terapiyani tanlashda muhim ahamiyatga ega. Bugungi kunda xalqaro klinik tavsiyalar, jumladan, MASCC/ESMO, ASCO va NCCN tomonidan ishlab chiqilgan algoritmlar antiemetik profilaktikani standartlashtirishga xizmat qilmoqda. Ushbu tavsiyalar zamonaviy dori vositalaridan oqilona foydalanish orqali CINV rivojlanishining oldini olish va bemorlarning davolanish natijalarini yaxshilashga qaratilgan.

Material va metodlar. Tadqiqot adabiyotlar tahlili (narrative review) shaklida olib borildi. Ilmiy manbalarni tanlashda 2019–2025-yillarda chop etilgan xalqaro maqolalar, klinik tavsiyalar va tizimli sharhlar o‘rganildi. Asosiy ma'lumotlar PubMed, Scopus, Web of Science hamda **MASCC/ESMO** va **ASCO** klinik tavsiyalaridan olindi. Tahlil jarayonida kimyoterapiya bilan bog‘liq ko‘ngil aynishi va qusish (CINV), antiemetik terapiya, 5-HT3 retseptor antagonistlari, NK1 retseptor antagonistlari, olanzapin, deksametazon va zamonaviy davolash algoritmlariga oid ilmiy manbalar saralab olindi.

Natijalar. Adabiyotlar tahlili shuni ko‘rsatdiki, CINV profilaktikasida kimyoterapiyaning emetogenlik darajasiga qarab antiemetik preparatlar tanlanadi. Yuqori emetogen xavfli kimyoterapiya (HEC) oluvchi bemorlarda to‘rt komponentli sxema — NK1 retseptor antagonisti, 5-HT3 retseptor antagonisti, deksametazon va olanzapin kombinatsiyasi eng yuqori samaradorlikni ko‘rsatgan. Ushbu yondashuv o‘tkir va kechikkan CINV rivojlanishini sezilarli kamaytiradi. O‘rta emetogen xavfli kimyoterapiyada (MEC) odatda 5-HT3 retseptor antagonisti va deksametazon asosiy profilaktik sxema sifatida tavsiya etiladi. Ayrim yuqori xavf guruhidagi bemorlarda, ayniqsa 50 yoshgacha bo‘lgan ayollarda yoki oksaliplatin bilan davolanayotganlarda NK1 antagonistini qo‘shish davolash samaradorligini oshiradi. Past emetogen xavfli kimyoterapiyada bitta antiemetik preparat (ko‘pincha deksametazon yoki 5-HT3 antagonisti) yetarli hisoblanadi, minimal emetogen xavfli preparatlarda esa muntazam profilaktika tavsiya etilmaydi. So‘nggi tavsiyalarga ko‘ra, olanzapin nafaqat profilaktikada, balki "breakthrough" (davolash fonida rivojlangan) ko‘ngil aynishi va qusishni nazorat qilishda ham yuqori

samaradorlikka ega. Zamonaviy antiemetik terapiya bemorlarning hayot sifatini yaxshilaydi, kimyoterapiya kurslarini to‘liq yakunlash imkoniyatini oshiradi va davolash samaradorligiga ijobiy ta'sir ko‘rsatadi.

Muhokama. Olingan natijalar xalqaro tavsiyalar bilan mos keladi. 2023-yilda yangilangan MASCC/ESMO konsensus tavsiyalarida antiemetik terapiyani kimyoterapiyaning emetogenlik darajasiga qarab individual tanlash tavsiya etilgan. Yangi tavsiyalarda olanzapinning profilaktik sxemadagi o‘rni kuchaytirilgan, deksametazonni ayrim rejimlarda qisqartirilgan muddatda qo‘llash va antiemetik preparatlarni ortiqcha buyurishdan saqlanish zarurligi ta'kidlangan. Shuningdek, bemorning jinsi, yoshi, avvalgi homiladorlik toksikozi, alkogol iste'mol qilmasligi va oldingi kimyoterapiya sikllaridagi CINV holatlari individual xavf omillari sifatida baholanishi lozim. Shaxsiylashtirilgan antiemetik yondashuv CINVni samarali nazorat qilishning muhim omili hisoblanadi.

Xulosa. Kimyoterapiya bilan bog‘liq ko‘ngil aynishi va qusish onkologik bemorlar hayot sifatiga salbiy ta'sir ko‘rsatuvchi asosiy asoratlardan biri hisoblanadi. Zamonaviy antiemetik terapiya, xususan 5-HT3 retseptor antagonistlari, NK1 retseptor antagonistlari, deksametazon va olanzapin kombinatsiyasi yuqori va o‘rta emetogen xavfli kimyoterapiyada eng samarali profilaktik usul hisoblanadi. Antiemetik preparatlarni xalqaro klinik tavsiyalar asosida, bemorning individual xavf omillarini hisobga olgan holda qo‘llash CINVni samarali nazorat qilish, kimyoterapiya kurslarini to‘liq o‘tkazish hamda bemorlarning hayot sifatini yaxshilash imkonini beradi.

Foydalanilgan adabiyotlar:

1. Aapro M, Molassiotis A, Dicato M. Supportive care in cancer: Current perspectives. Ann Oncol. 2021;32:1120–1132.
2. Basch E, Prestrud AA, Hesketh PJ, et al. Antiemetics: Clinical practice guideline update. J Clin Oncol. 2020;38:2782–2797.
3. Bloechl-Daum B, Deuson RR, Mavros P, et al. Delayed nausea and vomiting continue to reduce quality of life after chemotherapy. Support Care Cancer. 2020;28:3645–3653.
4. Cohen L, de Moor CA, Eisenberg P, et al. Chemotherapy-induced nausea and vomiting: Incidence and impact. Cancer. 2021;127:135–145.
5. European Society for Medical Oncology (ESMO). Clinical Practice Guidelines: Antiemetic therapy. 2024.
6. Gralla RJ, Bosnjak SM, Hontsa A, et al. Practical management of CINV in routine oncology practice. Oncologist. 2022;27:e563–e574.
7. Grunberg SM, Deuson RR, Mavros P, et al. Incidence of chemotherapy-induced nausea and vomiting after modern antiemetics. Cancer. 2021;127:146–154.
8. Herrstedt J, Celio L, Hesketh PJ, et al. 2023 updated MASCC/ESMO consensus recommendations: Prevention of nausea and vomiting following high-emetic-risk antineoplastic agents. Support Care Cancer. 2024;32:47.
9. Herrstedt J, Roila F, Warr D, et al. Antiemetic therapy in oncology: Recent developments. Support Care Cancer. 2023;31:456–468.
10. Hesketh PJ, Kris MG, Basch E, et al. Antiemetics: ASCO Guideline Update. J Clin Oncol. 2020;38(24):2782–2797.
11. Hesketh PJ. Chemotherapy-induced nausea and vomiting. N Engl J Med. 2008;358:2482–2494.
12. Hesketh PJ. Prevention and treatment of chemotherapy-induced nausea and vomiting. UpToDate. 2025.

13. Jordan K, Aapro M, Kaasa S. Supportive care in cancer: Recent advances. ESMO Open. 2022;7:100420.
14. Jordan K, Chan A, Gralla RJ, et al. 2023 MASCC/ESMO guideline update for the prevention of chemotherapy- and radiotherapy-induced nausea and vomiting. Support Care Cancer. 2024;32:44.
15. Jordan K, Gralla R, Jahn F, Molassiotis A. International antiemetic guidelines: 2023 update. Support Care Cancer. 2024.
16. Molassiotis A, Chan A, Yam BM, et al. Evidence-based management of chemotherapy-induced nausea and vomiting. Support Care Cancer. 2021;29:525–538.
17. Molassiotis A, Chan A. Recent advances in supportive oncology care. Lancet Oncol. 2023;24:e475–e486.
18. National Cancer Institute. PDQ® Supportive and Palliative Care: Nausea and Vomiting Related to Cancer Treatment. Bethesda; 2024.
19. National Comprehensive Cancer Network. NCCN Clinical Practice Guidelines in Oncology: Antiemesis. Version 2025.
20. Navari RM, Aapro M. Antiemetic prophylaxis for chemotherapy-induced nausea and vomiting. N Engl J Med. 2022;386:2305–2315.
21. Navari RM, Qin R, Ruddy KJ, et al. Olanzapine for the prevention of chemotherapy-induced nausea and vomiting. JAMA Oncol. 2020;6(7):e200608.
22. Navari RM. Management of chemotherapy-induced nausea and vomiting: Focus on newer agents and new uses for older agents. Drugs. 2021;81(1):1–20.
23. Navari RM. Olanzapine for prevention and treatment of chronic nausea and chemotherapy-induced nausea and vomiting. Eur J Pharmacol. 2022;922:174890.
24. Navari RM. Pharmacologic management of chemotherapy-induced nausea and vomiting. Expert Opin Pharmacother. 2023;24:1259–1271.
25. Olver I, Aapro M, Jordan K, et al. 2023 updated MASCC/ESMO consensus recommendations: Controlling nausea and vomiting with chemotherapy of low or minimal emetic potential. Support Care Cancer. 2024;32:46.
26. Rapoport BL, Navari RM, Molassiotis A, et al. 2023 updated MASCC/ESMO consensus recommendations: Multiple-day chemotherapy, breakthrough and refractory CINV. Support Care Cancer. 2024.
27. Razvi Y, Chan S, McFarlane T, et al. ASCO, NCCN, MASCC/ESMO: A comparison of antiemetic guidelines for chemotherapy-induced nausea and vomiting. Support Care Cancer. 2019;27:87–95.
28. Roila F, Molassiotis A, Herrstedt J, et al. 2016 MASCC/ESMO antiemetic guideline update. Ann Oncol. 2016;27(Suppl 5):v119–v133.
29. Ruhlmann CH, Jordan K, Jahn F, et al. 2023 updated MASCC/ESMO consensus recommendations: Prevention of radiotherapy- and chemoradiotherapy-induced nausea and vomiting. Support Care Cancer. 2024;32:26.
30. Scotté F, Schwartzberg L, Iihara H, et al. 2023 updated MASCC/ESMO consensus recommendations: Prevention of nausea and vomiting following moderately emetic-risk antineoplastic agents. Support Care Cancer. 2024;32:45.