ORIGINAL ANALYSIS

Efficacy of antiviral therapy in late treatment Acute respiratory viral infection: data from a comparative observational study

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Summary

Objective : to assess the clinical efficacy and safety of three antiviral therapy regimens (riamilovir, umifenovir, enisamia iodide) in the treatment of acute respiratory viral infections (ARVI) of moderate severity, prescribed in the late stages of the period of the height of the disease.

Material and methods. The study included 200 men (18–27 years old) divided into 4 equal groups: participants in group 3 received one of the antiviral drugs in a standard dosage, group 4 was a control group with pathogenetic therapy alone. The severity and duration of clinical symptoms of ARVI, the duration of hospitalization, the frequency of complications, as well as the presence of viral pathogens (based on the results of polymerase chain reaction on days 1 and 6) were assessed.

Quantitative variables are represented as median (*Me*) and interquartile interval (Q1; Q3) or mean (*M*) and standard deviation (*SD*). Verification of compliance with the normal distribution was carried out using the Shapiro–Wilk test. Statistical analyses included non-parametric methods, $\chi 2$ tests.

To compare the indicators between the four independent groups, the nonparametric Kruskel-Wallis test was used. In case of statistically significant differences ($p<0.05$), pairwise comparisons were made using the Mann–Whitney test with Bonferroni's correction for multiplicity comparisons.

Results and discussion. In all groups receiving antiviral drugs, there was a significant reduction in the duration of a number of clinical symptoms, hospitalization and a decrease in the frequency of complications compared to the group without antiviral therapy. The proportion of patients with elimination of respiratory viruses by the 6th day of illness was also higher in the groups with treatment (duration of fever, severity of systemic symptoms, frequency of complications) the greatest therapeutic effect was noted in the group of patients taking riamilovir (Triazavirin®).

Keywords: acute respiratory viral infections; antiviral therapy; riamilovir; umifenovir; enisamium iodide; clinical efficacy; late initiation of treatment

Conclusion. Antiviral therapy, started on the 3rd-5th day of the disease, can contribute to faster relief of clinical symptoms of ARVI and reduce the risk of complications. When assessing the clinical efficacy of antiviral drugs, more significant indicators were found in the riamilovir group, which can be taken into account when choosing therapy when patients seek medical care late in real clinical practice.

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Efficacy of antiviral therapy initiated at a later stage of acute respiratory viral infections: data from a comparative observational study

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Abstract

Aim. To assess the clinical efficacy and safety of three antiviral therapy regimens (riamilovir, umifenovir, and enisamium iodide) in the treatment of moderate acute respiratory viral infections (ARVIs) when initiated at a later stage of the acute disease period.

Material and methods. The study included 200 male participants aged 18–27 years, randomly assigned into four equal groups. Three groups received one of the antiviral drugs in standard doses, while the fourth served as a control group and received only pathogenetic therapy. The following outcomes were evaluated: severity and duration of ARVI clinical symptoms, length of hospitalization, incidence of complications, and the presence of viral pathogens (PCR testing on days 1 and 6). Quantitative variables are presented as median (*Me*) and interquar-tile range (Q1; Q3) or mean (*M*) and standard deviation (*SD*). Normality was assessed using the Shapiro–Wilk test. Statistical analysis included non-parametric methods and the $\chi 2$ test. The Kruskal–Wallis test was used to compare indicators between four independent groups. In cases of statistically significant differences ($p<0.05$), pairwise comparisons were performed using the Mann–Whitney U-test with Bonferroni correction for multiple comparisons. **Results and discussion.** All groups receiving antiviral therapy demonstrated a statistically significant reduc-tion in the duration of several clinical symptoms, shorter hospital stays, and a lower rate of complications compared to the group without antiviral treatment. A higher proportion of patients achieved viral elimination by day 6 in the treatment groups. Among them, the most pronounced therapeutic effect – in terms of fever duration, severity of systemic symptoms, and complication rate – was observed in the group treated with riamilovir (Triazavirin®).

Conclusion. Antiviral therapy initiated on days 3–5 of illness may accelerate the resolution of ARVI symptoms and reduce the risk of complications. In this study, riamilovir showed the highest clinical efficacy among the antivirals evaluated, which may be considered when choosing therapy for patients with delayed medical presentation in real-world clinical settings.

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Keywords:
acute respiratory viral infections; antiviral therapy; riamilovir; umifenovir; enisamium iodide; clinical efficacy; delayed treatment initiation

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Aetiotropic therapy in acute respiratory viral infections (ARVI) remains high in conditions of constant circulation of respiratory viral infections (ARVI)
viruses with varying sensitivity to antiviral drugs [1]. Despite the most attention to the treatment of influenza and COVID-19, ARVIs caused by other viruses continue to have a significant impact on the health of the working-age population [2, 3].

The choice of antiviral drugs approved for the treatment of ARVI is limited, and most empirically used drugs have a controversial evidence base [4]. The assessment of the effectiveness of ARVI therapy in the context of late treatment is especially relevant – on the 3rd-5th day after the onset of the disease, when viral replication may reach a peak or already decrease, but clinical symptoms, including respiratory, In these cases, not only the elimination of the virus is important, but also the ability of the drug to reduce the duration and severity of clinical manifestations, as well as the prevention of possible complications.

In this regard, the comparative
analysis of the clinical efficacy of several drugs used in the treatment of ARVI – riamilovir, umifenovir and enisamium iodide.

The aim of the study was to assess the clinical efficacy and safety of 3 antiviral therapy regimens (HTP; riamilovir, umifenovir, enisamia iodide) in the treatment of ARVI of moderate severity, prescribed in the late stages of the period of the height of the disease.

Material and methods

The study included 200 men aged 18 to 27 years who sought medical care with a clinical picture of moderate ARVI. All participants gave written informed consent to participate in the study. The study was approved by the decision of the Local Ethics Committee of the Kirov Military Medical Academy of the Ministry of Defense of the Russian Federation dated October 22, 2024, Protocol No 295.

The inclusion criterion was the duration of the disease at the time of presentation of at least 72 hours.

The exclusion criteria included participation in other clinical trials within the last 3 months, hypersensitivity to any component of the study drugs, inability to adhere to therapy
or performing procedures, as well as the presence of serious concomitant conditions. Patients were divided into 4 groups (50 people each):

- Group 1: riamilovir (Triazavirin®) 250 mg perorally three times a day for 5 days;
- Group 2: umifenovir (Arbidol®) 200 mg orally 4 times a day for 5 days;
- Group 3: enisamium iodide (Nobazit®) 250 mg perorally three times a day for 5 days;
- 4th group: without the appointment of an HTP (control group). The study was conducted from November 2024 to May

2025 on the basis of the Clinic of Infectious Diseases of the S.M. Kirov Military Medical Academy of the Ministry of Defense of Russia.

The patients were monitored until the complete resolution of the symptoms of the disease. Clinical efficacy was assessed by comparing the duration of hospitalization of patients, the duration and severity of the main symptoms of ARVI, the frequency of complications and the elimination of viruses from the body.

To analyze the severity of clinical symptoms, a unified 4-point scale was used (0 – absence of symptoms, 3 – extreme severity), which is filled in by patients daily.

Swabs from the oropharynx and nasopharynx were taken 2 times: on the day of inclusion (day 1) and on day 6 (or at discharge, if it occurred earlier). To detect DNA and RNA pathogens of ARVI (adeno-, corona-, metapneumovirus, influenza A and B viruses, rhinovirus, etc.), polymerase chain reaction (PCR) was performed using multiplex kits.

The safety of therapy was assessed by the incidence of reported adverse events.

Quantitative variables are represented as median (*Me*) and interquartile interval (Q1; Q3) or mean (*M*) and standard deviation (*SD).* Compliance with the normal distribution was checked using the Shapiro-Wilk test.

To compare the indicators between the 4 independent groups, the nonparametric Kruskel-Wallis test was used. In case of statistically significant differences ($p<0.05$) according to the Kruskel-Wallis criterion, a post-hoc analysis was carried out using pairwise comparisons according to the Mann-Whitney criterion using the Bonferroni correction for multiple comparisons.

Categorical variables (total frequency of virus detection by PCR results on the 6th day of hospitalization, incidence of complications) were compared

Where the expected number in the contingency tables was less than 5, the exact Fisher test was used. When the statistical significance of the common test (*p<0.05) was achieved,* pairwise comparisons were made between the groups using the appropriate test ($\chi 2$ or Fisher) and applying the Bonferroni correction multiple comparisons. The critical level of statistical significance was established at *p<0.05.*

Logistic regression was used to assess the association between complications, type of therapy and timing of its initiation.Results are presented as odds ratio (OR) with 95% confidence intervals (CI).

Statistical processing of the data was performed in the Python 3.11 (Anaconda) environment using the statsmodels, SciPy and pandas libraries.

Results and discussion

There were no statistically significant differences in the age of patients between the groups, *H=0.77; p=0.86 (Table 1).*

The duration of hospitalization in the group without etiotropic therapy was statistically significantly higher compared to the riamilovir, umifenovir and enisamium iodide groups (*p<0.05).* Statistically significant differences were found between the riamilovir and umifenovir groups and between the riamilovir and enisamium iodide groups (*p<0.05).* There was no statistically significant difference between the umifenovir and enisamium iodide groups in the duration of hospitalization, *p=0.7842 (Table 2).*

The duration of persistence of the main clinical symptoms in patients from the compared groups is presented in Table 1. 3.

The shortest duration of rhinitis was found in the riamilovir group (5.16±0.65 days), which statistically

Table 1. Distribution of patients by age, *Me* [Q1; Q3]

Research Group	Median (IQR)	*p* (Shapiro–Wilk)
Riamilovir (*n=50)*	19,0 [18,0–20,0]	0,0000
Umifenovir (*n=50)*	19,0 [18,0–21,0]	0,0000
Enisamia iodide (*n=50)*	19,0 [18,0–20,0]	0,0000
Control (*n=50)*	18,5 [18,0–20,0]	0,0000
Kruskel–Wallis criterion	H=0,77	0,8572

Table 2. Duration of hospitalization of patients from the compared groups

Group	Duration of hospitalization, days	Differences between groups in post-hoc analysis
Riamilovir (*n=50)*	7,28±0,67	Riamilovir ≠ umifenovir; riamilovir ≠ enisamia iodide; riamilovir ≠ without HTP
Umifenovir (*n=50)*	7,82±0,80	Umifenovir ≠ riamilovir; umifenovir ≠ without HTP
Enisamia iodide (n=50)	7,92±0,60	Enisamia iodide ≠ riamilovir; Enisamia iodide ≠ without HTP
Control (*n=50)*	8,90±0,51	Without HTP ≠ riamilovir; without HTP ≠ umifenovir; HTP-free ≠ enisamia iodide

Note: *Differences between the groups were assessed using the Kruskel–Wallis test: H=101.34, p=0.0000. HTP – antiviral therapy.*

Table 3. Duration of persistence of clinical manifestations of the disease in patients of the compared groups, days

Symptoms of the disease	Comparison Observation Groups				*p* (according to Kruskel-Wallis)	Significant differences in post-hoc analysis
	Riamilovir (*n=50)*	umifenovir (*n=50)*	Enisamia iodide (*n=50)*	without HTP (*n=50)*		
Rhinitis	5,16±0,65	5,50±0,93	5,40±0,83	5,72±0,90	0,0055	Without HTP ≠ riamilovir
Sore throat	5,00±1,05	5,32±0,59	5,10±0,68	5,48±0,84	0,0128	–
Cough	4,64±0,96	5,00±1,05	5,10±0,89	5,34±0,59	0,0016	Without HTP ≠ riamilovir
Pain and body aches	3,24±0,98	3,64±1,03	3,38±0,60	3,88±0,90	0,0007	Without HTP ≠ enisamia iodide; without HTP ≠ riamilovir
General weakness	3,60±0,70	3,84±0,74	3,90±0,84	4,16±0,65	0,0013	Without HTP ≠ riamilovir
Headache	3,38±0,60	3,66±0,69	3,28±0,93	3,98±0,71	0,0001	Without HTP ≠ enisamia iodide; without HTP ≠ riamilovir
Chills/fever/s weating	2,70±0,68	2,96±0,81	2,78±0,89	3,68±1,08	0,0000	Without HTP ≠ enisamia iodide; without HTP ≠ riamilovir; without HTP ≠ umifenovir
Fever	2,82±0,98	3,34±0,75	3,12±0,92	3,60±1,25	0,0021	Without HTP ≠ riamilovir; riamilovir ≠ umifenovir

Febrile fever	1,38±0,57	1,48±0,65	1,70±0,61	2,20±1,09	0,0000	Without HTP ≠ riamilovir; without HTP ≠ umifenovir; Enisamia iodide ≠ riamilovir

significantly differed from the group without HTP (5.72±0.90 days; *p=0,0055). In the groups of patients treated with umifenovir* and enisamia iodide, comparable indicators were revealed (5.50±0.93 and 5.40±0.83 days, respectively), which may indicate a general trend towards a decrease in the severity of cataral symptoms with the use of HTP.

Taking into account the duration of cough, riamilovir (4.64±0.96 days) showed a statistically significant advantage compared to the group without HTP (5.34±0.59 days*);p=0.0016),* in contrast to umifenovir (5.00±1.05 days) and enisamium iodide (5.10±0.89 days), which did not reach statistical significance.

Pronounced differences between the groups were revealed in relation to the following symptoms: chills, fever and sweating. All antiviral drugs showed a statistically significant reduction in the duration of these symptoms compared to the control group (3.68±1.08 days): riamilovir – 2.70±0.68 days, umifenovir – 2.96±0.81 days, enisamia iodide – 2.78±0.89 days (*p<0.001).*

The mean duration of fever was statistically significantly shorter in the riamilovir group (2.82±0.98 days) compared to the group without HTP (3.60±1.25 days; *p=0,0021).* This indicator in patients treated with umifenovir (3.34±0.75 days) and enisamia iodide (3.12±0.92 days) was also lower than in the comparison group, but no statistical value was revealed.

The most pronounced reduction in the duration of febrile fever was observed in the groups of riamilovir (1.38±0.57 days) and umifenovir (1.48±0.65 days), which were statistically significantly different from the group without HTP (2.20±1.09 days; *p<0,001).* Enisamia iodide showed intermediate values (1.70±0.61 days) and was also statistically significantly different from riamilovir (*p<0.05).*

The duration of headache manifestation was statistically significantly shorter both in the riamilovir group (3.38±0.60 days) and in the enisamium iodide group (3.28±0.93 days) compared to patients without HTP (3.98±0.71 days; *p=0,0001).*

The duration of pain and body aches was statistically significantly shorter in patients treated with riami-lovir (3.24±0.98 days) and enisamium iodide (3.38±0.60 days) compared to the group without HTP (3.88±0.90 days; *p=0,0007). In the* group of patients taking umifenovir, the duration of pain and body aches had an intermediate value (3.64±1.03 days), not reaching the level of statistical significance.

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Assessment of general weakness revealed a statistically significant advantage of the riamilovir group (3.60±0.70 days) compared to the group without HTP (4.16±0.65 days; *p=0.0013),* which was not observed in the umifenovir and enisamium iodide groups, which did not achieve statistical significance.

In the group of patients treated with riamilovir, the duration of persistence of most of the evaluated clinical symptoms was minimal, which may indicate a more pronounced therapeutic effect in comparison with other antiviral drugs.

The average values of the severity of the analyzed clinical symptoms of ARVI in patients from the compared groups are presented in Table 1. 4.

In patients treated with riamilovir and umifenovir, was noted Smallest Severity Majority symptoms of ARVI compared to the enisamia iodide and without HTP groups, but without statistically significant differences (*p>0,05).* The results obtained when assessing the frequency of elimination of ARVI pathogens on the 1st (PCR-1) and 6th day (PCR-2) of observationagainst the background of various treatment regimens are presented in Table 1. 5.

The incidence of detection of viral pathogens by PCR at the time of enrollment in the study was 70% in the riamilovir group, 44% in umifenovir, 38% in the enisamia iodide group, and 32% in the group without HTP. Accordingly, in the riamilovir group on the 1st day of the study (PCR-1), there were ≥59% more cases of detected viral agents than in the enisamium iodide, umifenovir and non-HTP groups.

On the 6th day of follow-up (PCR-2), all groups of patients treated with HTP showed a positive trend in the form of a decrease in the frequency of virus detection, but it was most pronounced in the riamilovir group (from 35 to 9 positive samples, a decrease of 74.3%) compared to the group without HTP (a decrease of 37.5%).

In addition, in most patients treated with riamilovir, elimination of viruses, including influenza B virus, corona-, metapneumo-, adenoviruses or various variants of co-infection of adenoviruses with other respiratory pathogens, was detected by the 6th day of therapy, in contrast to other groups, where the elimination of viral pathogens occurred less frequently. In the absence of HTP, the frequency of virus detection reached 62.5% (10 out of 16), mainly due to adeno-and rhinoviruses, which may indicate their slower natural elimination without the use of antiviral drugs with a direct mechanism of action.

Incidence of complications in the analyzed groups is presented in Table 1. 6.

The lowest complication rate was recorded in the riamilovir group (24%), which is statistically significantly lower compared to the group without HTP (54%, *p<0.05). A similar* result was found for enisamium iodide (26% of complications), which was also statistically significantly different from the group without HTP (*p<0.05).* In the umifenovir group, the complication rate was 30%, but the differences with the untreated group did not reach the level of statistical significance (*p>0.05 after Bonferroni adjustment). The incidence of acute maxillary sinusitis ranged from 20% in the riamilovir group to 38% in the group* without HTP; however, the differences between the groups were not static.significant. Similarly, pneumonia was more commonly detected in the untreated group (16%) compared to the other groups (4-6%), but the level of significance was not reached.

Table 1. Table 7 shows the frequency of the complicated course depending on the antiviral drug used and the timing of the start of therapy.

The use of antiviral drugs led to a significant reduction in the risk of complications compared to the absence of specific therapy. The most pronounced effect was recorded in the riamilovir group (OSH 0.268; 95% CI 0.112–0.641; *p=0,003),*
it is followed by enisamia iodide (OR 0.299; 95% CI 0.128–0.696; *p=0,005)* and umifenovir (OR 0.362; 95% CI 0.148–0.883; *p=0,026).*

Table 4. Weighted average values of the severity of clinical symptoms of the disease in patients from the compared groups for the observation period, points

Symptom of the disease	Comparison Observation Groups [symptom severity, points (*M±SD*)]				*p* (according to Kruskel-Wallis)	Significant differences in post-hoc analysis
	without HTP (*n=50*)	Enisamia iodide (*n=50*)	umifenovir (*n=50*)	Riamilovir (*n=50*)		
Sore throat	2,41±0,16	1,97±0,26	1,62±0,24	1,53±0,25	0,0000	Without HTP ≠ enisamia iodide; without HTP ≠ riamilovir; without HTP ≠ umifenovir; enisamia iodide ≠ riamilovir; enisamia iodide ≠ umifenovir; riamilovir ≠ umifenovir
Pain and body aches	2,30±0,21	2,07±0,21	1,70±0,28	1,46±0,26	0,0000	Without HTP ≠ enisamia iodide; without HTP ≠ riamilovir; without HTP ≠ umifenovir; enisamia iodide ≠ riamilovir; enisamia iodide ≠ umifenovir; riamilovir ≠ umifenovir
Headache	2,03±0,19	2,00±0,24	1,70±0,24	1,58±0,28	0,0000	Without HTP ≠ riamilovir; without HTP ≠ umifenovir; enisamia iodide ≠riamilovir; Enisamia iodide ≠ umifenovir
Cough	2,51±0,19	1,87±0,19	1,56±0,25	1,59±0,31	0,0000	Without HTP ≠ enisamia iodide; without HTP ≠ riamilovir; without HTP ≠ umifenovir; enisamia iodide ≠ riamilovir; Enisamia iodide ≠ umifenovir
General weakness	2,44±0,18	2,04±0,26	1,65±0,19	1,59±0,27	0,0000	Without HTP ≠ enisamia iodide; without HTP ≠ riamilovir; without HTP ≠ umifenovir; enisamia iodide ≠ riamilovir; Enisamia iodide ≠ umifenovir
Chills/fever/sweating	1,98±0,24	1,98±0,28	1,63±0,23	1,60±0,23	0,0000	Without HTP ≠ riamilovir; without HTP ≠ umifenovir; enisamia iodide ≠ riamilovir; Enisamia iodide ≠ umifenovir
Rhinitis	2,27±0,23	1,85±0,25	1,61±0,25	1,54±0,27	0,0000	Without HTP ≠ enisamia iodide; without HTP ≠ riamilovir; without HTP ≠ umifenovir; enisamia iodide ≠ riamilovir; Enisamia iodide ≠ umifenovir

The data obtained allow us to state a statistically significant reduction in the risk of complicated ARVI against the background of the use of a specific HTP, while the lowest odds ratio was found in the group of therapy with the use of riamilovir, which makes it possible to judge its potential clinical advantage.

Throughout the study, the patients did not note adverse events that could be associated with the use of the drugs used.

The results of this study confirm the advisability of prescribing etiotropic HTP even with late initiation of ARVI treatment. Despite the fact that the maximum viral replication, as a rule, is achieved on the 1st day of the disease [5–7], the use of antiviral drugs on the 3rd–5th day showed significant clinical and virological advantages, especially in the riamilovir group.

One of the possible explanations for the effectiveness of the use of HTP in the late stages of the disease may be

not only direct inhibition of viral replication, but also secondary mechanisms of action of these drugs, in particular their effect on the immune and inflammatory response [8]. It is known that even after a decrease in the viral load, the activation of innate and acquired immunity remains, accompanied by the production of inflammatory cytokines, interferons, and endothelial activation [9]. Thus, the drugs used in the study can have a clinical effect and reduce the risk of a complicated course of ARVI.

Riamilovir, which has shown the best results in research, has known activity against a wide range of RNA and DNA-containing viruses [10–12]. However, the effects observed in the present study may go beyond direct antiviral action. The reduction in the severity of clinical symptoms such as fever, chills, weakness and headache may reflect the additional effect of the drug on the disease development mechanisms associated with cytokine

Table 5. Frequency of detection of pathogens of acute respiratory viral infections in the compared groups, abs. (%)

Pathogen	Comparison Observation Groups							
	Riamilovir (*n=50*)		Enisamia iodide (*n=50*)		umifenovir (*n=50*)		without HTP (*n=50*)	
	PCR-1	PCR-2	PCR-1	PCR-2	PCR-1	PCR-2	PCR-1	PCR-2
Adenovirus	3	1	2	2	5	2	2	2
Adenovirus + coronavirus	1	1	0	0	0	0	2	2
Adenovirus + metapneumovirus	1	0	0	0	0	0	0	0
Adenovirus + rhinovirus	1	0	0	0	0	0	0	0
Adenovirus + influenza A(H1N1) virus	1	1	0	0	0	0	2	0
Adenovirus + influenza B virus	1	1	0	0	0	0	2	2
Coronavirus	2	0	0	0	3	2	2	0
Coronavirus + metapneumovirus	1	0	0	0	0	0	0	0
Coronavirus + rhinovirus	1	1	0	0	0	0	0	0
Influenza A virus	1	1	2	0	5	2	2	0
Influenza A(H1N1) virus	2	1	7	2	4	0	2	2
Influenza B virus	10	0	2	0	3	0	0	0
Influenza B virus + rhinovirus	3	1	0	0	0	0	0	0
Metapneumovirus	5	0	2	2	2	0	0	0
Rhinovirus	2	1	4	0	0	0	2	2
Total positives*	35 (70%)	9 (18%)	19 (38%)	6 (12%)	22 (44%)	6 (12%)	16 (32%)	10 (20%)

Note: ** – differences between the compared groups in the frequency of pathogen detection in PCR-2 did not reach statistical significance ($\chi 2$, p=0.58).*

Table 6. The incidence of complications in patients from the compared groups, abs. (%)

Complication	Comparison groups				Comparing groups (significant)	*p**
	Riamilovir (*n=50*)	umifenovir (*n=50*)	Enisamia iodide (*n=50*)	without HTP (*n=50*)		
Acute maxillary sinusitis	10 (20)	12 (24)	11 (22)	19 (38)	–	0,1579
Pneumonia	2 (4)	3 (6)	2 (4)	8 (16)	–	0,0677
Total complications	12 (24)	15 (30)	13 (26)	27 (54)	Riamilovir ≠ without HTP; Enisamia iodide ≠ without HTP	0,0046

**** Using the*** *□2 χριτεριον, p-values were calculated; for low-frequency complications ("pneumonia"), the exact Fisher test was used in the contingency tables when the expected values of <5 were present in the contingency tables.*

Table 7. Incidence of complicated disease depending on the antiviral drug used and the timing of therapy initiation

Drug	Therapy start day	With complications	No complications	Total Patients	Complicatio n rate, %
Without therapy	3	15	13	28	53,6
Without therapy	4	12	10	22	54,5
Enisamia iodide	3	6	17	23	26,1
Enisamia iodide	4	6	17	23	26,1
Enisamia iodide	5	1	3	4	25,0
Riamilovir	3	5	16	21	23,8
Riamilovir	4	4	13	17	23,5
Riamilovir	5	3	9	12	25,0
Umifenovir	3	3	7	10	30,0
Umifenovir	4	6	14	20	30,0
Umifenovir	5	6	14	20	30,0

cascade" and vascular inflammation. This is hypothetically consistent with *in vitro data* [13] on the effect of pro-inflammatory molecules on expression, but requires further confirmation.

Umifenovir and enisamia iodide showed moderately expressed clinical effects. At the same time, in the group of patients taking umifenovir, the greatest reduction in the severity of symptoms of systemic intoxication (pain and body aches, headache) was revealed, which may be due to the peculiarities of its effect on the interferon response [14]. Enisamia iodide, despite its structural proximity to other derivatives of isonicotinic acid, demonstrated less impact on the severity of clinical symptoms and elimination of viruses, which may be due to both pharmacokinetic features and the level of sensitivity of current viral strains to this drug.

Observed decrease in the overall incidence of complicated

The course of ARVI in the groups of riamilovir and enisamia iodide in comparison with the absence of therapy may reflect not only the effect on viral replication, but also the potential ability of these drugs to affect the inflammatory components of the pathogenesis. In scientific literature, it is increasingly emphasized that the severity of clinical manifestations and the possibility of the development of complications of ARVI can be associated not only with the viral load, but also with the nature of the immune response, including the duration of the production of pro-inflammatory cytokines and the activation of epithelial damage [15, 16]. Against this background, the hypothesis of the modulating effect of some antiviral drugs, especially with late initiation of therapy, seems to be justified. This general trend requires further verification in studies with larger samples and the inclusion of laboratory markers of inflammation.

No reported adverse reactions

when using all the drugs used, it confirms their safety in real clinical practice. This is especially important given the limited choice of approved drugs for the treatment of ARVI of non-grip etiology.

Also relevant is the observation of older patients and patients with concomitant pathology, the inclusion in the study design of the determination of additional laboratory markers of inflammation and viral load. It is relevant to assess the justification for the use of certain antiviral drugs in terms of clinical effect and costs in the context of a seasonal rise in the incidence of ARVI.

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