MAIN ASPECTS OF INFLUENZA PREVENTION IN MODERN CONDITIONS AMONG MEDICAL UNIVERSITY STUDENTS

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Abstract: *Influenza is a massive viral infection that can affect anyone, outbreaks of which are more common in winter and early spring. The causative agent of influenza is a virus that passes from infected people into the nasopharynx of others. The influenza virus has a pronounced ability to change its antigenic structure, so the diagnosis of "influenza" can be made repeatedly during the life of each person. Influenza differs from many infectious diseases in that it is easily transmitted from a sick person to a healthy person - through airborne droplets (when talking, coughing, sneezing), causing illness a day after infection. Prevention of influenza and ARVI (acute respiratory viral infection) is a set of measures aimed at preventing infection of the human body with viruses that cause the disease.*

Key words: *influenza, acute respiratory viral infections, epidemic outbreak, epidemics, pandemic influenza.*

Relevance: Acute respiratory viral infections (ARVI) are an etiologically heterogeneous group of infectious diseases of the respiratory tract. Every year, according to WHO (World Health Organization), every adult on average gets sick with an acute respiratory infection 2 to 4 times a year. The total economic damage from this nosological group is continuously increasing. ARVIs are an etiologically heterogeneous group of infectious diseases of the respiratory tract, but have similar development mechanisms, epidemiological and clinical

characteristics [1]. Influenza-like diseases accompanied by damage to the respiratory system have been known since ancient times. The first mention of an influenza-like illness dates back to 412 BC, when Hippocrates described an "outbreak" of the disease in the Athenian army, which was accompanied by fever, persistent cough, headache, sore throat and sore throat. Since the 12th century. More than 100 influenza epidemics have been described that affected the population of both several cities and large regions. Periodically, epidemics turned into pandemics, spreading simultaneously across several countries and continents. The first documented and described as a truly worldwide influenza pandemic occurred in 1889. The pandemic began in February 1889 in Bukhara, from where the flu spread along transport routes to most major cities of Russia and Western Europe by December [2]. In terms of its social significance and the enormous damage caused to public health and the economy, influenza ranks first among all human diseases. The incidence of influenza and influenza-like infections exceeds the total incidence of all other infections. There is not a single human disease that is currently comparable in this indicator to these infections. They account for 10–30% of the temporary disability of the population. In some years, influenza and acute respiratory infections accounted for up to 40% of all diseases among adults registered in the clinic, more than 80% of all infectious pathologies, and more than 60% of diseases among children [3]. The incidence of acute respiratory viral infections, including influenza, remains at a high level, increasing annually in the autumn-winter period. In recent epidemic seasons, there has been simultaneous circulation of some types and subtypes of influenza A virus, including the pandemic strain. Currently, the most commonly reported acute respiratory viral infections are influenza, adeno and respiratory syncytial infections. The threat is posed by the constant variability of influenza viruses and the emergence of new pathogens of acute respiratory viral infections [4]. During mass outbreaks of influenza, infection can affect 5–10% of the population. During an epidemic, the average mortality rate in the world due to influenza or its complications can reach 870 cases per 100 thousand population.

According to WHO, the development of the pandemic may be associated with the emergence of a new strain of the virus (influenza A), against which people have no immunity [5]. As a result of the large-scale work carried out to protect public health, maintain a stable sanitary and epidemiological situation and prevent the spread of infectious diseases in the country, epidemiological stability is ensured. At the same time, despite the measures taken, there are a number of omissions in ensuring the epidemiological safety of the population, preventing cases of mass flu, and combating new highly pathogenic viral infections with pandemic potential. The analysis indicates the presence of conditions and problems that impede the effective implementation of measures for the effective prevention of influenza and other acute respiratory infections. In order to further improve the system to combat the spread of influenza and other acute respiratory infections, strengthen measures to ensure a favorable sanitary and epidemiological situation and protect public health, as well as the consistent implementation of the tasks defined by the Action Strategy for the five priority areas of development of the Republic of Uzbekistan in 2017-2021, Resolution of the President of the Republic of Uzbekistan dated May 18, 2018 No. 3729 was adopted on measures to further improve the system to combat the spread of influenza and other acute respiratory infections in the Republic of Uzbekistan [6]. The susceptibility of people to influenza viruses should be recognized as absolute. The risk of the disease, its severity and outcomes largely depend on the type of influenza virus and the person's previous contact with it. The development of influenza infection is influenced by a person's age and concomitant pathology, as well as the choice of preventive measures and means.

Vaccination is considered an effective and cost-effective method of specific prevention of influenza for all age groups of the population. The main goal of vaccination is to reduce the risks of infection, complications and mortality in both vaccinated and contact persons. In addition, one of the goals of vaccination is to limit the risk of the formation of a new pandemic variant [7].

The aim of the study: evaluate methods of preventing influenza among TMA students, evaluate the level of vaccination among students, determine the most popular methods of nonspecific prevention.

Vaccination is considered an effective and cost-effective method of specific prevention of influenza for all age groups of the population. The main goal of vaccination is to reduce the risks of infection, complications and mortality in both vaccinated and contact persons. In addition, one of the goals of vaccination is to limit the risk of the formation of a new pandemic variant. Modern influenza vaccines are three- and four-component preparations that contain current strains of influenza viruses according to the recommendations of WHO experts [7]. The reservoir and source of infection is a person with obvious and subtle forms of the disease. Birds are the natural reservoir for influenza A virus. Overcoming interspecies barriers, influenza viruses penetrate populations of new potential hosts, circulating for quite a long time and becoming the cause of dangerous epidemics, pandemics and epizootics [8]. Influenza is one of the most aggressive and unpredictable diseases, standing apart from the list of known infections. It is distinguished by: its wide and ubiquitous prevalence, due to constant mutations of the virus and the emergence of new strains (according to statistics, influenza epidemics annually affect from 5 to 15% of the population around the world); development of post-infectious complications: from common pathologies of the respiratory system (pneumonia, rhinitis, sinusitis, bronchitis and otitis) to damage to the membranes of the heart (myocarditis or pericarditis) and inflammation of the membranes of the brain (encephalitis, meningoencephalitis and arachnoiditis); high mortality rate: according to the European Influenza Working Group, during epidemics the number of deaths from influenza or complications caused by it can reach 870 per 100 thousand population [1,7]. It has been proven that after influenza and acute respiratory infection, the incidence of myocardial infarction and death increases. Mortality in patients with chronic obstructive pulmonary diseases after influenza can reach 30% compared to 0.1% in healthy people [9].

Materials and research methods: The study was carried out through questionnaires. An anonymous survey was conducted of 67 first-year students of the Faculty of Pediatrics. The questionnaire contained questions about methods of nonspecific and specific prevention of influenza and ARVI with several suggested answer options, and also provided the opportunity to give your own answer to the question. The material was processed using a personal computer running the Windows 7 operating system.

Research results: The results of the survey showed that almost all students classified influenza as a dangerous (82.6%) infectious disease. In this regard, the majority of students consider it necessary to carry out specific prevention of influenza (82.6%). In 2022 Less than 1/4 of students were vaccinated against flu. Most often, students use ventilation of rooms (73%) and consumption of foods containing sufficient amounts of vitamins (73%). Less frequently, students use such prevention methods as daily wet cleaning (17%), nasal shower (29%) and wearing a mask in crowded places. Among the leading reasons for refusing vaccination, first-year students named: inappropriateness of vaccination (14.7%), fear of complications from vaccination (32%), lack of time (3.4%). Almost half of the students in this group (42.7%) do not know where to go regarding vaccination issues. 9.4% of students did not indicate the reason. It should be noted that students' opinions about influenza vaccine prevention change after illness. Thus, about 8% of students indicated in the questionnaire that after suffering a severe flu, they are now required to be vaccinated annually. At the same time, among students who do not consider vaccine prevention to be advisable, only 3 people had previously had a severe form of influenza. Under these conditions, the role of methods of nonspecific prevention of influenza and ARVI increases. Most often, students resort to regular ventilation of the rooms in which they are located and consume foods containing sufficient amounts of vitamins and microelements. Much less frequently, students use prevention methods such as daily wet cleaning and wearing a mask in crowded places (in classes, at work, on public transport); students view the flu as a highly contagious

infection. To assess individual health, a number of very conditional indicators are used: health resources, health potential and health balance. Health resources are the morphofunctional and psychological capabilities of the body to change the balance of health in a positive direction. Increasing health resources is ensured by all measures of a healthy lifestyle.

Conclusions: ARVIs are an etiologically heterogeneous group of respiratory tract infectious diseases that have similar development mechanisms, epidemiological and clinical characteristics. This group of diseases is characterized by high contagiousness, rapid spread, and a significant number of complications, primarily among people at risk (chronic diseases, immunodeficiency conditions, old age, and others) [1,10]. To achieve the effect of vaccination, it is necessary to annually cover at least 75% of people in each high-risk group. However, vaccination alone does not fully solve the problem of preventing influenza and ARVI, since vaccinated people develop antibodies only to those influenza viruses that are included in the vaccine. No specific preventive measures have been developed against other respiratory viral diseases. In this regard, it is important to carry out nonspecific prevention of influenza and ARVI with the widespread use of antiviral drugs and medications that increase the overall resistance of the body and can prevent the occurrence of the disease [2,7,10]. According to data provided by WHO, it was thanks to mass vaccination that it was possible to reduce the intensity of influenza epidemics throughout the world. The modern vaccine can protect about 80% of both adults and children from influenza. Nonspecific prevention of influenza and ARVI is a set of general measures, including: room ventilation, good nutrition, use of masks, hand washing, taking medications that affect the influenza virus [8,10]. A fairly large number of acute respiratory viral infections are not controlled by specific vaccine prevention. Therefore, for nonspecific prevention, we use 4 main groups of drugs in our practice. These include antiviral drugs, interferons, interferon inducers and immunostimulating drugs [7,0]. As for antiviral drugs, WHO in its recommendations advises not to use this group for the purpose of prevention,

except in situations where a person was directly in the focus of a viral infection, since the inappropriate, uncontrolled use of antiviral drugs leads, as already mentioned, to the formation of resistant strains and reducing the sensitivity of the pathogen to the drug. When we are dealing with drugs that, in addition to the antiviral effect, have an interferon-producing effect, a more effective effect occurs, since the nonspecific link of the immune defense is also stimulated [6,10]. The survey showed a low level of specific flu prevention among TMA students. Students prefer nonspecific flu prevention, while the most effective method is vaccination. Specific prevention is vaccine prophylaxis, but, unfortunately, it is developed only for influenza. It is not carried out for other respiratory viral infections; for them, vaccines as such simply do not exist. Accordingly, a doctor should recommend that all people get vaccinated to protect themselves against influenza as the most severe respiratory viral infection. It should be carried out in the autumn before the epidemic rise in incidence [5,9,10]. Based on the study, the following basic measures to prevent influenza are recommended: get vaccinated against influenza before the start of the epidemic season, reduce the time spent in crowded places and public transport, use a mask in crowded places, avoid close contact with people who have signs of the disease, regularly carefully wash your hands with soap, especially after the street and public transport, rinse the nasal cavity, especially after the street and public transport, regularly ventilate the room, regularly do wet cleaning in the room, humidify the air in the room, eat as many foods containing vitamin C as possible, eat as many dishes as possible with the addition of garlic and onions, use drugs and products that enhance immunity as recommended by a doctor, follow healthy lifestyle measures, get enough sleep, eat a balanced diet and exercise regularly physical education.

In conclusion of the article, I would like to emphasize that timely and effective prevention of influenza and ARVI should be comprehensive and include both specific measures (vaccination) and nonspecific ones (using

interferons). The global task of society and the state is to introduce as many aspects related to a healthy lifestyle into educational standards as possible.

REFERENCES

1. Larina V.N., Zakharova M.I., Benevskaya V.F., Golovko M.G., Solovyov S.S. Acute respiratory viral infections and influenza: etiology, diagnosis and treatment algorithm. RMJ. Medical Review. 2019;3(9(I)):18-23.

2. N.D. Yushchuk, O.S. Khadartsev. Flu prevention. and acute respiratory viral infections, taking into account the peculiarities of their epidemic process (materials for preparing the lecture). Infectious diseases: news, opinions, training. 2018. T. 7, no. 2. pp. 44–51.

3. E.V. Mikhailova, T. N. Malyugina, D. Yu. Levin, A.P. Averyanov, A. Yu. Serdyukov, P. A. Zheleznikov. Socially significant aspects of influenza prevention through the eyes of medical students. Saratov Medical Scientific Journal 2018; 14(4):680–682.

4. G.N. Karetkina. Influenza, ARVI: problems of prevention and treatment. Infectious diseases: news, opinions, training No. 4 2015. 25-34.

5. L.G. Yarilina, T.P. Markova, A.G. Chuvirova. Flu prevention. Allergology and immunology in pediatrics, No. 1. 2014. 7-10.

6. Resolution of the President of the Republic of Uzbekistan, dated May 18, 2018, No. PP-3729. On measures to further improve the system to combat the spread of influenza and other acute respiratory infections in the Republic of Uzbekistan.

7. E.I. Burtseva, E.A. Mukasheva, A.G. Rosatkevich The main directions of effective prevention of influenza in modern conditions. Epidemiology and vaccine prevention. No. 5. 2017. 80-85.

8. M. S. Savenkova. Diagnosis and treatment of influenza in children. Children's infections. 2016.№ 1. 48-54.

9. And Shirokova, Flu vaccination: relevant, safe, reliable. "Remedium" of nosology. Flu. 2015. 37-38.

10. DM Chervyakova. Prevention of influenza among medical university students Bulletin of medical Internet conferences (ISSN 2224-6150) Vol. 8. No. 10. 2018. 505.