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ORGANIZATIONAL FRAMEWORK FOR MANAGING THE EPIDEMIC PROCESS IN SALMONELLA INFECTION IN UZBEKISTAN

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Abstract
The article discusses the organizational basis for managing the epidemic process in salmonella infection in Uzbekistan. Salmonellosis, called "diseases of civilization", are widespread all over the world, and at present we are talking not about the complete destruction of this infection, but about reducing the incidence rate. The paper analyzes the epidemiological features of salmonellosis in Uzbekistan, and also proposes a new system of epizootological and epidemiological surveillance. the need to strengthen the interaction between sanitary-veterinary and sanitary-epidemiological services for effective control and prevention of salmonellosis, as well as organizational measures for the prevention and control of infection.

Keywords. Salmonellosis, epidemiological process, epizootological surveillance, sanitary and veterinary service, sanitary and epidemiological service, prevention, infection.

INTRODUCTION

Salmonellosis, called "diseases of civilization", is so widespread that at present in no country there is a question of their elimination, but only a decrease in the incidence rate [4]. Salmonellosis occupies a special place among acute intestinal infections. Unlike dysentery, typhoid, escherichiosis, cholera, they are caused by microorganisms that are pathogenic in natural conditions for animals and humans. [1,3,4].

In the last decade, the epidemiological features of the incidence of salmonellosis have changed, in particular, the frequency of human morbidity, infection with salmonella in farm animals, poultry, and the environment has increased. Nosocomial outbreaks of salmonellosis have become more frequent, the etiological structure and nature of the epidemic process of salmonellosis have changed significantly [1,5]. increased migration of the population, rapid development of the public catering system, etc. [4].In the 90s in Uzbekistan, as a result of political and economic reforms, significant changes took place in the system of production and sale of food, including poultry products. Most of the public catering and trade enterprises became private property. At the same time, there was a reform of the sanitary-epidemiological service, accompanied by a sharp limitation of the frequency of inspections of controlled objects and the volume of microbiological studies of environmental samples. social life of society could not but have an impact on the epidemic and epizootic processes of salmonellosis[6].

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In this situation, there is a need for a theoretical substantiation of the system of measures to combat and prevent salmonella infection, taking into account the knowledge of modern features of not only the epidemiology, but also the epizootology of salmonellosis enteritidis. Meanwhile, the epizootic process of salmonellosis enteritidis among poultry and its impact on the intensity, dynamics and structure of morbidity of the population have not been studied in many respects. industrial poultry products, the connection between epizootic and epidemic processes require the restructuring of the existing system of epidemiological surveillance of salmonellosis according to the principle of epizootological and epidemiological surveillance [2].

The epidemiological analysis of the incidence of salmonellosis in Uzbekistan revealed the following epidemiological features of this disease.

Along with the increase in the number of circulating salmonella, in some geographical areas there is the emergence of serotypes that have not been found there before.

Despite the ever-increasing number of circulating salmonella, the bulk of diseases in Uzbekistan are caused by no more than 10-15 predominant serotypes: salmonella enteritidis, typhimurium, heidelberg, derby, newport, infantis, mission, anatum, haifa, etc.

Currently, **Salmonella enteritidis (Salmonella enteric** subsp. **enterica** serovar **enteritidis),** occupies a leading role in the etiology of salmonellosis in Uzbekistan. The increase in the incidence is due to the intensification of the epizootic process at industrial poultry enterprises, the products of which are mainly used for food by the population [8].

Salmonella infection in the republic is characterized by seasonality, the highest incidence is recorded in the spring-summer period [9].

The intraannual dynamics of human incidence of salmonellosis does not have an obvious pattern, although in summer the level increases slightly. Apparently, this is due to great difficulties in preserving finished products (ready meals) due to high temperatures and trips for summer holidays to places where it is difficult to ensure the safety of finished products. In the summer, the number of food outbreaks also increases.

The epidemiological situation with salmonellosis in the Republic is still tense. Despite the trend towards a decrease in the incidence observed in recent years, salmonellosis occupies one of the leading places in the overall structure of the incidence of acute intestinal infections.

The territorial distribution of salmonellosis diseases was distinguished by a pronounced contrast, while the city of Tashkent, Tashkent, Fergana and Andijan regions were especially distinguished as extremely unfavorable in terms of the incidence of salmonellosis. [7]. In a number of territories, internal migration of the population, as well as the import of food from other territories, can have a direct impact on the incidence rate.

The increase in the incidence of salmonellosis in Tashkent, Tashkent, Fergana and Andijan regions can also be explained by the improvement in the detection, diagnosis and registration of salmonellosis cases, since it is in these territories that bacteriological and serological diagnosis of salmonellosis is well established. [7].

In general, the serovar landscape of salmonella in the Republic is diverse, 19 serological variants of salmonella are isolated from patients and bacterial carriers.

In recent years, the etiological structure of salmonellosis has been dominated by S. enteritidis and S. typhimurium serovars, which accounted for 80% of human cases.

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The above indicates that to date S. enteritidis and S. typhimurium have not exhausted their epidemic potential, and, therefore, determine the features of the modern epidemic process of salmonellosis and require the targeted development of preventive measures in the fight against salmonellosis.

In the case of salmonellosis, the organization of joint supervision of the sanitary-veterinary and sanitary-epidemiological services is crucial. The sanitary and veterinary service conducts constant monitoring of the incidence of salmonellosis in animals, as well as the frequency and characteristics of salmonella excreted from animals and feed for them.

Sanitary and epidemiological supervision provides for control over the sanitary and epidemiological regime in public catering facilities, compliance with the technological regime for the preparation of food products.

The results of sanitary and veterinary supervision of salmonellosis are the basis for measures (withdrawal of contaminated products or products coming from disadvantaged farms, carrying out measures in public catering facilities in accordance with established sanitary and hygienic requirements, in the event of food outbreaks - mandatory bacteriological examination of food products and all employees of public catering enterprises).

To develop a program of epizootological and epidemiological surveillance of salmonellosis, which allows to carry out targeted epidemiological diagnostics, planning and methodological support of preventive, as well as anti-epidemic measures based on a combined analysis of the morbidity of the population and the epizootic process of these infections among farm animals and poultry, makes it possible to improve the epidemiological surveillance of salmonellosis, which is necessary to control the incidence at the state and interstate levels.

The unfavorable epidemiological situation with salmonellosis requires solving scientific issues. The main ones are the study of the epidemic process of salmonellosis and the possible influence on it of the variability of the biological properties of salmonella (virulence, sensitivity to antimicrobial drugs, etc.); identification of factors that determine the change in the etiological structure of salmonellosis and the variability of the biological properties of salmonella.

Based on the results of scientific research, we have developed epizootological and epidemiological surveillance of salmonellosis, in relation to the conditions of Uzbekistan. When formulating the general algorithm of epizootological and epidemiological surveillance, a unified scheme of epidemiological surveillance of infectious diseases was used.

From the organizational point of view, the developed program of epizootological and epidemiological surveillance of salmonellosis reflects the management activities of the sanitary-epidemiological, veterinary service and consists of three interrelated subsystems

The information subsystem is implemented in the direction of four monitoring (monitoring of the incidence and carriage of salmonella among the population and animals, serological, bacteriological and socio-ecological monitoring).

The diagnostic subsystem includes several stages, such as the analysis of the manifestations of the epizooto-epidemic process, the determination of the leading type of the epizooto-epidemic process (zoonotic, anthroponous), the assessment of transmission routes and factors, the identification of risk factors for the epizoo-epidemic process of salmonellosis.

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The management subsystem of epizootological and epidemiological surveillance of salmonellosis includes planning, organizational and methodological support and control of the implementation of veterinary sanitary, sanitary and hygienic, anti-epizootic and anti-epidemic measures.

The effectiveness of epizootological and epidemiological surveillance will largely be determined by the basis of interaction between sanitary-epidemiological and veterinary services. At the same time, it is obvious that the veterinary service should carry out its work on the principle of epizootological surveillance, which can be based on the above-mentioned areas of epizootological and epidemiological surveillance. In order to coordinate the work of all interested services and departments to combat salmonellosis in each region under the regional Sanitary and Epidemiological Inspection and the Agency for Sanitary and Epidemiological Welfare, it is advisable to create an interdepartmental commission on salmonellosis and organize its permanent work.

Findings

The proposed program of epizootological and epidemiological surveillance of salmonellosis is recommended to be introduced into the activities of the sanitary-veterinary and sanitary-epidemiological services of the Republic of Uzbekistan, which will help reduce the incidence of salmonellosis.

References

1. Abdugopurov, E., Saidkasimova, N., & Mavlyanov, D. (2025). Sel va suv toshkinlari natizhasida yuzaga keluvchi epidemiologik vaziyatlarda yukumli kasallyklarning agoli orasida tarkalishini oldini olish. Science and Innovation for National and Global Development, 1(1), 68-79.
2. Tajibayeva, D. A., Saidkasimova, N. S., & Khamzayeva, N. T. (2025). Improving the epidemiological features of acute infectious intestinal infections and their epidemiological control (on the example of the Republic of Karakalpakstan).
3. Saidkasimova, N. S., Jumaniyazova, M. K., & Khamzayeva, N. T. (2024). A MANIFESTATION OF THE EPIZOOTIC PROCESS OF SALMONELLOSIS.
4. Mirtazaev, O. M., Matnazarova, G. S., & Magzumov, H. B. (2023). ZOONOTIC SALMONELLOSIS IS A DISEASE OF CIVILIZATION. "MICROBIOLOGY DOLZARB MUAMMOLARI" MAVZUSIDAGI REPUBLIC ILMIY-AMALY ANJUMANI, 132.
5. Matnazarova, G. S., Khamzaeva, N. T., Saidkasimova, N. S., Kurbaniyazova, M. O., & Madenbayeva, G. I. (2024). EFFECTIVENESS OF THE BNT162B2 (Pfizer–BioNTech) VACCINE IN PREVENTING COVID-19 INFECTION IN CHILDREN AGED 5-11 YEARS.
6. Mirtazaev, O. M., Saidkasimova, N. S., Matnazarova, G. S., & Khatamov, A. (2022). Characteristics of the manifestation of the epidemic process of salmonellosis. Results of National Scientific Research International Journal, 1(2), 18-31.
7. Saidkasimova, N. S., & Mirtazaev, O. M. (2020). Epidemic Process of Salmonellosis in Tashkent. Indian Journal of Forensic Medicine & Toxicology, 14(4).
8. Saidkasimova, N. S., Mirtazaev, O. M., & Mirtazaeva, N. A. (2020). Social factors

Web of Medicine: Journal of Medicine, Practice and Nursing
webofjournals.com/index.php/5

influencing the incidence of salmonellosis in Uzbekistan. In School of Epidemiology: Theoretical and Applied Aspects of Epidemiology (pp. 63-65).

9. Mirtazayev, O. M., Briko, N. I., Matnazarova, G. S., Saidkasimova, N. S., Toshboev, B. Y., & Khamzaeva, N. T. (2020). SCIENTIFIC, METHODOLOGICAL AND ORGANIZATIONAL BASES OF MANAGEMENT OF THE EPIDEMIC PROCESS IN CASE OF SALMONELLOUS INFECTION IN UZBEKISTAN. Central Asian Journal of Pediatrics, 2020(3), 5-14.
10. Saidkasimova, N. S., Matnazarova, G. S., & Mirtazayev, O. M. (2018). Some epidemiological patterns of salmonellosis in Uzbekistan. Biology and Medical problems, 4, 95-96.
11. Mirtazaev, O. M., Saidkasimova, N. S., Tursunova, D. A., & Khudoerov, V. E. (2017). Immunoprophylaxis is a strategic direction in Uzbekistan to combat infectious diseases. Infection and Immunity, (S), 282-282.
12. Toshtemirovna, K. N., Islamovna, S. G., & Sultanovna, M. G. (2023). The Effectiveness Of A New Food Substance-A Hard Gelatin Capsule-" Sedan Bark" Is Being Studied In Children Who Have Recovered From The Coronavirus. British View, 8(3).
13. Mirtazaev, O. M., Tursunova, D. A., Saidkasimova, N. S., & Matnazarova, G. S. (2017). Some features of the epidemic process of viral hepatitis A in Uzbekistan. Infection and Immunity, (S), 659-659.
14. Khamzaeva, N. T., & Saidkasimova, N. S. (2023). The effectiveness of a new food substance-a hard gelatin capsule-«vizion junior» is being studied in children who have recovered from the coronavirus. world Bulletin of Public Health, 20, 41-45.
15. Mirtazaev, O. M., & Saidkasimova, N. S. (2016). Current aspects of the epidemiology of salmonellosis in the Republic of Uzbekistan. Infection, immunity. Pharmacology, 7, 103-106.
16. MATNAZAROVA, G., MIRTAZAEV, O., BRYANTSEVA, E., ABDUKAKHAROVA, M., NEMATOVA, N., & KHAMZAEVA, N. (2020). The new coronavirus-COVID-19 in Uzbekistan. International Journal of Pharmaceutical Research (09752366), 12(4).
17. Saidkasimova, N. S., & Mirtazaev, O. M. (2020). Epidemic Process of Salmonellosis in Tashkent. Indian Journal of Forensic Medicine & Toxicology, 14(4).
18. Matnazarova, G. S., Khamzaeva, N. T., & Abdullaeva, F. O. (2023). Covid-19 Infection bilan kasallanish kursatklarini bemorlarning jeans, yoshi, kasbi wa kunlar bўyicha tahlili. ILMIY TADQIQOTLAR VA JAMIYAT MUAMMOLARI, 2, 80-81.
19. Mirtazaev, O. M., & Saidkasimova, N. S. (2016). Current aspects of the epidemiology of salmonellosis in the Republic of Uzbekistan. Infection, immunity. Pharmacology, 7, 103-106.

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