ACADEMICIA
An International Multidisciplinary Research Journal
(Double Blind Refereed & Peer Reviewed Journal)

DOI: 10.5958/2249-7137.2021.02277.1

IMMUNIZATION PROBLEMS IN POULTRY FARMS IN SAMARKAND REGION

Mirsaidova R*; Abdullaev Sh; Ruzikulov R.F*****

*Independent Researcher,
Samarkand Institute of Veterinary Medicine,
UZBEKISTAN

**Independent ResearcherN
Samarkand Institute of Veterinary MedicineN
UZBEKISTAN

***Associate Professor,
Samarkand Institute of Veterinary Medicine,
UZBEKISTAN

ABSTRACT

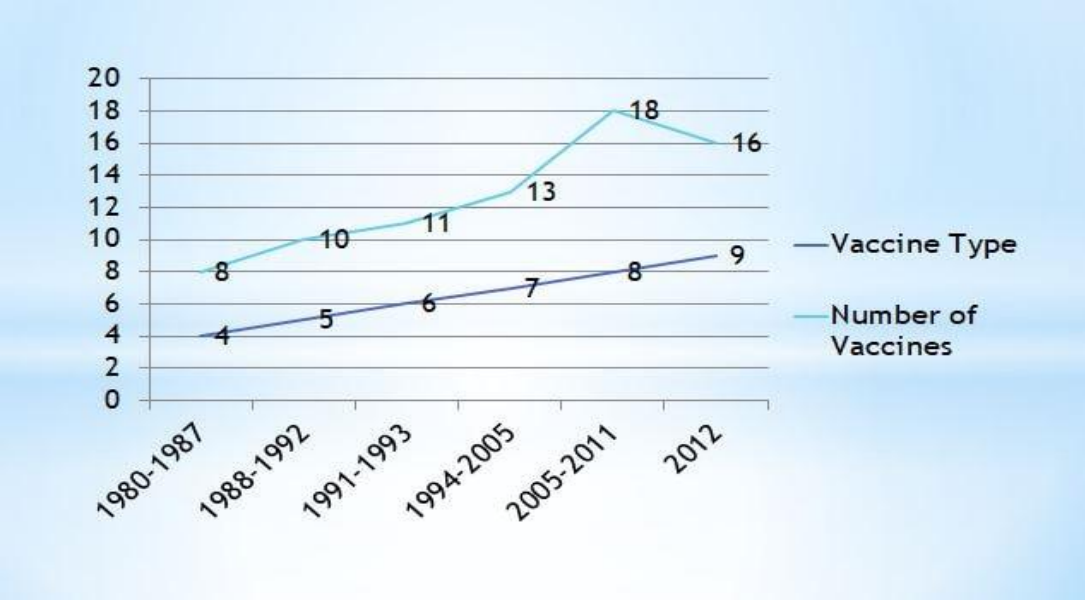
"Samarkand-Parranda" JV analyzed the frequency and effectiveness of scheduled vaccinations from 1980 to 2012 and noted that the type and number of scheduled vaccinations have doubled. JV "Ohalik-Lomannparranda" analyzed the frequency and intensity of vaccinations against Newcastle disease in 1997-1998. An increase in the number and type of vaccinations has been found to cause immunosuppressive syndrome. Immunosuppression was primarily determined by the suppression of postvaccinal immunity generated against Newcastle disease and infectious bronchitis. Immunosuppression has been reported to increase the risk of conditionally pathogenic infections. Immunosuppression has also been found to be influenced by the large population density of poultry farms and the narrow distances between poultry houses and farms. It is recommended to use the immunosuppression phenomenon and give priority to small business to prevent immunosuppressive syndrome.

KEYWORDS: *Immunosuppression, Immunoresonance, Newcastle Disease, Small Private Business.*

INTRODUCTION

Both the media and the scientific literature (4) show that since the second half of the twentieth century, the epizootiological and epidemiological situation in the world has been deteriorating again. This process is reflected in the recurrence of problems such as tuberculosis, brucellosis, salmonellosis, colibacillosis, prevention and therapy, as well as the emergence of anthropozoonotic nosological units such as acquired immunodeficiency syndrome, bovine rabies, avian influenza, swine flu. The fact that there is a state of tension in the immune system of the world's population and pets also plays a role in the emergence of this problem. We came to this conclusion based on the results of our epizootiological observations in the field of industrialized poultry and livestock (Diagram 1). This is because it is known that the virulence of infectious pathogens increases during the passage of an organism with increased susceptibility due to the weakening of the immune system. The table shows that in an industrialized poultry farm, both the type and number of vaccinations of chickens per day to 105 days have doubled in 30 years. Today, chickens are vaccinated against any pathogen every 5-6 days. Such a situation can not but strain the immune system of the chick.

Diagram 1 Dynamics of scheduled vaccinations of chickens in JV "Samarkand-Parranda" for 1-105 days



MATERIALS AND METHODS

The source of our research is the monitoring of the number and intensity of vaccinations with live virus vaccine "La-Sota" against Newcastle disease in 1995-1999 JV "Ohalik-Lomannparranda" and JV "Samarkand-Parranda" in 1980-2012, "Samarkand-Poultry" “Indicators on the effects of immunosuppression in the JV and our subsidiary farms were conducted in 2011-2012. In our research, we used epizootiological, clinical, serological and pathomorphological methods. Opportunities for bacteriological and virological research are being explored.

Results and their analysis

The Samarkand-Parranda JV raises 465,000 chickens and hens. So many chickens are being raised at the Maroqand enterprise, 500 meters away, and this is the situation. In addition, 100 thousand chickens with a diameter of 2 km, 5-6 thousand chickens are raised on 3-4 small farms. Biothermal decontamination of manure is not provided. It can be said that the air entering the ventilation system is rich in virus and bacterial particles. Our subsidiary farm is 1 km away from the settlement, the distance between 3 hens for 2 thousand chickens each is 50-60 m. Due to the fact that the vaccination regime is for 2012, the consequences of immunosuppression were noted in JV "Samarkand-Parranda" and in our subsidiary farms. The incident consisted mainly of costs associated with Newcastle disease. Although biothermal decontamination of manure has begun on our subsidiary farm, it has not been fully implemented. In Samarkand-Parranda JV, the cost of immunized chickens was 6-8%, while in our subsidiary farms it did not exceed 3%.

In 1999, when I was a fifth-year intern at Ohalik-Lomannparranda JV, I noticed that the number of vaccinations against Newcastle disease varied in different chickens. In some hens, revaccination is required every 3-4 months, while in others the immune system fluctuates within a sufficient range even for 10-16 months. The type and number of vaccinations are increasing year by year as we are able to determine the nature of this phenomenon in a timely manner (1,2,3) and not be able to introduce it into production, calling it an immunoreonance phenomenon. It has also been recognized in the scientific literature that vaccination of birds with many types of live vaccines during intensive periods can cause the problem of mixed infections (4). The features of this syndrome, which we are beginning to understand, are expressed in the fact that, first of all, the suppression of post-vaccination immunity is observed in those who have a high frequency of revaccination. First of all, the vaccine against the Newcastle disease pathogen is exposed to immunosuppressive effects. In second place are changes in infectious bronchitis. As with Acquired Immune Deficiency Syndrome, an increase in the incidence of conditionally pathogenic infectious agents has been reported. Salmonellosis in particular plays a leading role here. In particular, the hens are 150-170 days old, which has risen to the top of the egg entry. The Lomann-Brown cross of the Lomann chicken breed shows stronger immunity than the Lomann-classic and Lomann-Sandy crosses. As a result, salmonellosis vaccination has to be included in the plan. In addition, prophylactic antibiotics have to be used in pre-vaccination risk cases. Antibiotics alone are combined with furazolidone in cases where they are not effective enough.

An important role in the emergence of the phenomenon of immunodeficiency syndrome is played by the enlargement and consolidation of industrialized livestock and poultry enterprises and their proximity to residential areas. This condition leads to the opening of natural foci of intestinal infections and even internal leishmaniasis. Biothermal decontamination of manure has not been established in any of the large and small livestock and poultry farms. However, in industrialized countries where livestock and poultry are grown, the distance between not only enterprises but also their workshops is 5-6 km (5-6). In this regard, we believe that the lack of veterinary technology for the complete cleaning of chickens from the canals plays an important role in the development of immunodeficiency syndrome. Because anemia cannot fail to lower the immune system (Table 1).

TABLE 1 NUMBER OF VACCINATIONS OF CHICKENS IN FARMS 9 AND 10 AGAINST NEWCASTLE PATHOGENS IN 1997-1998 IN JV "OHALIK-LOMANNPARRANDA"

№	Row Chicken №	Duration of egg laying	Number of vaccinations
1	9	12	4
2	10	14	1

Current technologies involve filling the hen house with a population of the same age. We have found that this can also contribute to immunosuppression. We found that the number of vaccines could be reduced due to the occurrence of the phenomenon of immunosuppression in a herd formed from populations that differed in age by one month (Table 2).

TABLE 2 NUMBER OF VACCINATIONS AGAINST NEWCASTLE DISEASE IN HENS FORMED FROM EQUAL AND DIFFERENT POPULATIONS

Indicators	Same age shop (n = 8)	Two different age shops (n = 11)
1. Immune duration, days M ± m	176±33,17	239±91,98
2. Number of vaccinations M ± m	1,5±0,17	2,6±0,22

The problem is exacerbated by the lack of formal veterinary service and reporting on smallholders and farms. It is impossible to overcome this without the creation of specialized agrozoovetservis laboratories. Today, specialists from Russia, Ukraine, Turkey and Germany are involved in the use of bacteriological, especially virological, and patmaterials are sent.

CONCLUSIONS

1. The phenomenon of immunological resonance should be tested under production conditions.

2. The vaccination schedule in chickens should be analyzed and corrected.

3. It is necessary to establish laboratories specializing in the provision of agrozoovetservis services to industrialized small livestock and poultry farms.

4. Veterinary legislation should provide for biothermal treatment of manure.

REFERENCES

1. Abdullaev M., Abdullaev Sh., Abdullaev I.T. The role of antiidiotics in the development of post-vaccination immunosuppression against the virus of Newcastle disease in Kur., J. «Problems of biology and medicine» №1 p. 7-11 Samarkand, 1999

2. Abdullaev Sh.M., Ruzikulov R., Abdullaev M., The effect of passive immunity on the formation of active immunity against Newcastle disease in chickens. "Monitoring the spread and prevention of the most dangerous animal diseases", Proceedings of the Scientific Conference, pages 9-11, Samarkand 2001.

3. Bakulov I.A. and dr. The system of epizootologicheskogo monitoring is especially dangerous for exotic and maloizuchennyx infectious diseases of animals., P. 27-29.

4. Gorelov Yu.M., Oslojneniya u jivotnyx, privityx jivymi vaktsinami, «Monitoring rasprostraneniya i predotvrashcheniya osobo opasnyx bolezney jivotnyx», Materialy dokladov nauchnoy konferentsii, s. 48-60, Samarkand 2006g.

5. Djon P. Nichols et al. Agricultural and agribusiness in the USSR, 1993. Faculty of Economics. University of Texas. s. 1-8.

6. Fisini V.I. Poultry farming Rossii-strategy of innovative development »// Moscow-2009. 375s.