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The use of "Profemin" tea in the treatment and prophylaxis of a disease of the ovarian organs of quail

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Abstract
As the ovaries make up 30% of the female quail's body, the main non-communicable diseases are found in the reproductive organs. The main puprose of the research is to obtain high results when using natural herbal preparations, not antibiotics. Because the antibiotics used for treatment remain in the meat and eggs of quail for a long time and then they can get into the human body. For this reason, since 2009, 27 EU countries have been banned from producing products containing antibiotics.

Keywords: quail, veterinary drugs, medicinal plants, diseases, ovarian, oviduct, peritonitis

Introduction

In recent times, during the breeding of quails in the Republic of Azerbaijan, in addition to the decrease in egg productivity of quails, an increase in diseases of the ovary and ovarian tract among quails was also observed. In order to obtain eggs from quails in the Republic of Azerbaijan, most farmers and private farms breed white English quails, not Japanese quails. This is due to the high quantity and weight of the eggs, as well as the appearance of the carcass obtained from them, the yellowish skin, and the high weight of the carcass. Since the ovarian organs of mother quails make up 30% of the body, it has been determined that among the non-infectious diseases that occur in farms, diseases of the causative organs occur the most.

Antibiotics and sulfanilamide preparations are widely used in the treatment of ovarian diseases in most countries, especially in the Russian Federation, including Azerbaijan, in the treatment and prevention of diseases of quails. However, in the meat and eggs obtained from quails during the treatment with antibiotics, the used antibiotics remain for a long time, which causes people to take those drugs.

Taking into account the above, during and after 5-7 even, 10 days after the treatment the meat and eggs of quails that have been injected those antibiotics should not be consumed, but these indications are not followed, even the food prepared from antibiotics is used for productivity on quails.

The latest drugs used to prevent quail's diseases in Azerbaijan are Apromisin, Albacin, Avidox, Biocillin, Domoxin, Enrostin, Enrofloxacin, Baytril-10, Ciprofloxacin, etc. However, the use of antibiotics and feed prepared with antibiotics has been banned since 1971 in Great Britain, since 1986 in Switzerland, since 1996 in Denmark, and since 2006 in other countries of Europe. Since 2009, 27 countries in the European Union have banned the release of products using antibiotics [3, 5, 4].

Ovarian organs' diseases among quails usually occur during the transitional period of the year and mainly more often at the beginning of winter.

Scientist studying the ovarian diseases have concluded that the occurrence of diseases in the reproductive organs, in many cases, stems from incorrect arrangement of feed ration, the presence of phosphorus in the feed ration, and the moisture content of the mat material above 25% during continuous thick mat storage.

Formation of many diseases of the ovarian organs may be caused by traumas and the heavy weight of the ovary, crushes inside the cages during the breeding of quails in the cages, and falling from a high floor of the cage to the floor [1, 7, 8].

Scientists dealing with the treatment of diseases of quail and birds note that mixed diseases are observed in the ovarian organs during inflammatory processes, infection and invasive diseases occurring in different parts of the body.

Medicinal plants growing in the grasslands of Azerbaijan have been widely used for many years in poultry farming in Azerbaijan, especially among quails, to prevent ovarian diseases. It has been observed in many cases that diseases of the ovary and ovarian tract - the application of the rose flower, nettle leaves, bitter gourd, lady's weed, chamomile, and yarrow used in acute salpingoperitonitis prevented the diseases, and the treatment resulted in recovery if the diagnosis was made in time in the early stages of the disease. "Profemin" tea was used in the prevention and treatment of salpingitis, salpingoperitonitis. The composition of "Profemin" tea consists of nettle leaf, chamomile flower, rosehip flower, shepherd's purse grass, boimadaran grass, water pepper grass. These medicinal plants contain anti-inflammatory, antiseptic, spasmolytic and hemostatic substances that increase the tone of the muscles of the ovarian tract.

Research material and methodology

Research work was carried out at the Department of Anatomy, Pathology and Pathophysiology of the Veterinary Faculty of the Azerbaijan State Agricultural University and at the Department of Botany, in the vivarium controlling by the Veterinary Faculty, and at the Quail Breeding Training Center, on white English quails.

Quails were kept in vivarium controlling by the Faculty of Veterinary Medicine of ADAU in 3 and 4-story cages in the winter months, and in 3-story cages under the shed in summer months. The research scheme is shown in Table.1

Table 1: The research scheme

Groups	Number of quails	Ingredients used
Control	500	Staple diet+Baytril-10 – 1 ml per 1 liter of water + Polivital-0.25 mg
Experience	500	Staple diet+Profemin tea 5 ml, 30% sprouted wheat irradiated with ultraviolet rays 4% Aydag zeolite+ Polivital-0.25 mg – 7 days

Profemin tea is usually produced in the form of a filter pack. 3 pieces (6 grams) of Profemin tea are added to 1 liter of water and brewed for 15-20 minutes. The finished infusion is cooled, 5 ml of 1 head of quail is used for 7 days. The clinical and physiological condition of mother quails was determined by generally accepted methods. The blood examination was carried out in the laboratory named after H. Hajiyev of the Department of Non-Communicable Diseases.

We tested "Profemin tea" in the prophylaxis of salpingoperitonitis. The obtained results are shown in Tables 2, 3. The clinical and morphological indicators of the blood of the brood quails were determined one month after Profemin tea was applied for 7 days as a preventive measure during the period when the pullets under recovery entered the breeding stock. In addition to Profemin tea, 4% Aydan zeolite, 30% germinated wheat irradiated with ultraviolet rays and 0.25 mg Poly-Vital were also used in the experimental group.

Table 2: Clinical indicators of pullets under restoration after Profemin tea was used for prophylactic purposes (n=10) M±m

Indicators	Groups			
	Control		Experiment	
	At the beginning of the study	After treatment	At the beginning of the study	After treatment
Internal temperature ^{0}C	40,11±1,03	40,93±1,96	40,14±1,78	40,02±2,01
The number of heart beats, 1 min.	186,4±3,77	193,6±4,12	192,4±2,46	181,9±3,04
The number of breathing movements, 1 min.	31,2±0,84	36,4±1,04	32,9±1,07	30,8±1,21

In the control group, the treatment method used in the farm (ASAU) was applied. During the examination of the clinical indicators of the recovering female quails at 35 days and 63 days, it was found that among the quails with the youngest age at the beginning of the laying period, signs such as injuries in the cloaca and deviation of the ovarian tract were observed. The shell of the first eggs taken was often found to be covered with bloody stains. The reason for this is explained by reasons such as the long duration of lighting in the building (20-24 hours), the excess of protein and Vitamin E in the feed ration. Normally, female white English and marble quails should lay their first eggs on days 45-48, but quails in both control group and experimental group started laying eggs on days 40-42, so the above-mentioned changes in the oviduct and cloaca occurred. Cloacas of such female quails(pullets) are quickly chewed by other quails, that is, images similar to cannibalism are formed.

The internal temperature of female quails(pullets)in such a situation increases, the number of heartbeats and the amount of respiratory movement increases as well. In female quails(pullets) that were kept before treatment and were under recovery, the temperature was 40.11±1.03, the number of heartbeats was 186.4±3.77 in 1 minute, and the number of respiratory movements was 31.2±0.84 times in 1 minute. Almost the same cases were observed in the experimental groups with little difference. The internal temperature of female quails that received profemin for 7 days for treatment and prophylaxis purposes was 40.02±2.01, the number of heartbeats was 181.9±3.04, and the number of respiratory movements was 30.8±1.21.

When determining the morphological indicators of blood (Table 3), it became clear that the preventive measures carried out with Profemin had a positive effect.

Table 3: Morphological and biochemical indicators of the blood of quails in recovery during the applying of Profemin tea (n=10) M±m

Indicators	Groups	
	Control	Experiment
Erythrocytes,10^{12}/l	2,91±0,14	3,03±0,09
Leukocytes, 10^9/l	26,7±1,87	21,4±1,45
Hemoglobin, qr/l	93,8±1,95	102,4±2,25
Total protein in serum	42,2±1.26	28,4±1,41
Calcium mmol/l	2,43±0,02	2,87±0,08
Phosphorus, mmol/l	1,68±0,02	1,76±0,02

When determining the morphological and biochemical indicators of the blood, it was found that during this period, the inflammatory process in the ovary and ovarian tract, as well as signs of ovarian and ovarian tract diseases were also observed, so it was determined that the morphological indicators of the blood changed around the physiological norms in both the control and experimental groups.

It was determined that the amount of calcium and phosphorus in blood serum was below the physiological norms in both groups. It is clear from the obtained results that during the development of ovarian organs in 5-9 weeks, the number of pullets that died and got out from ovarian organs in both control and experimental groups was more than that of rats that were exposed to other diseases. In the 5-9 weeks of the experiment, the productivity indicators of the pullets under recovery are shown (Table 4).

Table 4

Indicators	Groups	
	Control	Experience
Live weight of pullets at 9 weeks	195±3,6	209±3, 4
The first egg was gained, number	38	44
Egg weight, gr	7, 4	7, 9
Abnormalities in the egg	-	-
Output:head		
Ovarian organs	1	2
Respiratory organs	2	2
Digestive organs	2	2
Died: head.		
Ovarian organs	-	-
Respiratory organs	-	-
Digestive organs	1	1
Preserved healthily,%	88	90

Usually, quails of both sexes lay their first egg at 42-45 days of age. As can be seen in Table No. 4, no abnormal eggs were observed in both groups in the eggs obtained during the experimental period. During this period, 1 quail from each of the control and experimental groups was removed, as the clinic of the ovarian organs was consistent with the diseases of the ovarian organs. During this period, it was determined that most cases of morbidity and mortality occurred from diseases of the digestive organs.

As seen between egg operations in the repair, ovarian data monitoring is almost extremely low, and the survival percentage was exactly 88% and 90% in both the control and experimental groups

Conclusion

During the period of repair, ovarian diseases are few among the pullets, including salpingoperitonitis is not observed at all.

Reduction of both ovaries and ovarian tract was observed among the pullets that were slaughtered during the study. From the obtained results, it can be concluded that giving Profemin tea for 7 days to prevent ovarian tract disease and salpingoperitonitis in pullets selected for transfer to the broodstock herd gives high results. Based on the results obtained above, we aimed to apply Profemin tea after the pullets are transferred to the brood stock, especially during the peak period of laying eggs.

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