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EFFICIENCY OF ANTI-FLU DRUGS IN THE TREATMENT OF DERMATOMYCOSES IN CATS

***Annotation:** this article describes the evaluation of the effectiveness of the use of antifungal drugs (ketoconazole, itraconazole, terbinafine) and griseofulvin in the treatment of dermatomycosis in cats. Comparative therapy for ringworm in cats was given with and without immunomodulators.*

***Key words:** ringworm, fungal infection, materials, analysis, skin lesions, high contagiousness.*

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ЭФФЕКТИВНОСТЬ ПРИМЕНЕНИЯ ПРОТИВОГРИПКОВЫХ ПРЕПАРАТОВ ПРИ ЛЕЧЕНИИ ДЕРМАТОМИКОЗОВ У КОШЕК

Аннотация: в данной статье описывается оценка эффективности применения противогрибковых препаратов (кетоназола, интраконазола, тербинафина) и гризеофульвина при лечении дерматомикозов у кошек. Сравнительная терапия при дерматомикозах у кошек приводилась с применением иммуномодуляторов и без них.

Ключевые слова: дерматомикоз, грибковая инфекция, материалы, анализ, поражение кожи, высокая контагиозность.

1. INTRODUCTION

Dermatomycosis is one of the most common fungal infections in the world, it is a superficial fungal skin disease. The most common causative agents of this zoonosis are pathogenic fungi of the genera *Microsporum* and *Trichophyton* [1, p. 259-66]. The infectious agent is the arthrospore, which is formed by fragmented hyphae. The incubation period averages 7-14 days [2, p. 1532–7]. The mechanism of infection is associated with the penetration of spores into the hair follicle. Enzymes penetrate the hair cuticle and germinate to the zone of keratogenesis [3, p.205–12]. Hair in the telogen stage produces keratin slowly or does not produce it at all, so it can rarely be affected [4, p. 598–604].

2. EPISOOTOLOGICAL DATA.

Ringworm can cause a wide range of skin lesions in cats, including alopecia, scaling, and crusting, as well as papules, pustules, nodules, and ulcers. Dermatomycosis is an important medical and social problem, even though ringworm is not accompanied by significant mortality, they are characterized by high

contagiousness, which leads to the disease of both humans and animals of different age groups. Ringworm affects more susceptible young animals than adults [5, p. 407–24].

Problems associated with the treatment of feline dermatophytosis have always existed, but more attention has been paid to their solution since 1988 [6, p. 161]. According to the instructions "On measures against fungal diseases of farm animals" (1954), cats with microsporia were subject to destruction [7, p. 1457]. The instruction "On measures for the prevention and elimination of ringworm diseases in animals" (1983) does not include measures to combat dermatophytosis in cats. In the period from 1988 to 2000, highly effective vaccines against dermatophytosis of felines and canines (Trivak, Mikovak, Polivak-TM, Vakderm, Multikan-7 and Vakderm-F) were developed and introduced into veterinary practice [8, p. 98-100].

For the treatment of dermatomycosis in animals, drugs of various pharmacological groups have been proposed [9, p. 313-26]. At the same time, correctly selected complex therapy leads to a reduction in the recovery time of the animal. In this connection, the search for highly effective and cost-effective treatment regimens remains relevant [10, p. 161-4].

3. MATERIALS AND METHODS.

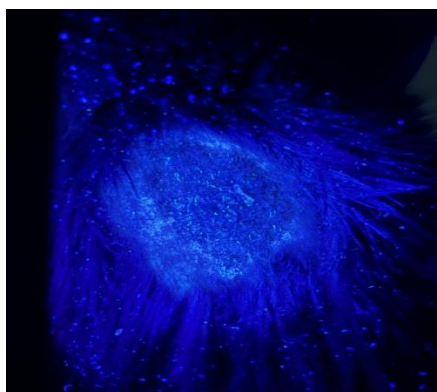
The study was conducted on the basis of the Astana veterinary clinic in Astana in 2022. Cats of various breeds, ages and gender served as the object of the study. In total, 21 animals were involved in the experiment, aged from 6 months to 9 years, with a live weight of 4 kg. The studied animals were on outpatient treatment. The experimental and control groups were formed according to the principle of paired analogues with 7 heads in each group. The feeding and maintenance of the observed animals was not changed.

To make a diagnosis, clinical and laboratory studies (hematological, microscopic, cultural) were carried out.

4. RESULTS OF STUDIES.

The diagnosis of ringworm was established in a complex manner taking into account the history, clinical manifestations of the disease, Wood's lamp examination, scraping microscopy in order to detect *Microsporum canis*, and the results of cultures on special nutrient media.

Clinical examination of animals was carried out by examination on the 5th, 10th, 20th and 30th day of observation of the animals from the start of the experiment. Clinical and laboratory studies were carried out before, during and after the experiment. The assessment of the clinical condition of cats was carried out in dynamics, throughout the entire period of the disease and until the persistent absence of clinical signs of the disease.



Drawing 1. Detection of foci of ringworm using a Wood's lamp

Experimental and control groups were selected for the research. The drugs were given to animals during feeding in the appropriate doses: ketoconazole - 5 mg/kg, itraconazole - 3 mg/kg, terbinafine - 30 mg/kg, griseofulvin 20 mg/kg. The animals were clinically observed and sampled for mycological analysis at weekly intervals. The animal was classified as "healthy" only if there were no clinical signs of microsporia and three negative results of the mycological analysis of the biomaterial taken from them were obtained.

In the experimental group taking terbinafine, clinical recovery of all animals was noted after 3 weeks, and negative results of mycological examination of the

biomaterial were obtained 4 weeks after the start of treatment. Biochemical blood tests revealed no abnormalities.

In cats given ketoconazole and itraconazole, hair regrowth was noted after 3-4 weeks, and negative mycological results after 4-5 weeks. Animals in some cases noted changes in the organs of the gastrointestinal tract (vomiting, refusal to feed, diarrhea).

In the experimental group that took griseofulvin, clinical recovery of animals was noted after 6-7 weeks, negative results of mycological examination of the biomaterial were obtained 7-8 weeks after the start of treatment. During the course of treatment, all cats showed pronounced signs of damage to the organs of the gastrointestinal tract and changes in biochemical blood parameters, indicating depression of liver functions.

5. CONCLUSION

This study showed that the use of therapeutic regimens, which include the use of terbinafine at a dose of 30 mg/kg, is the most effective and less dangerous for animals.

The use of other antifungal drugs is also effective, but requires longer courses of treatment and the mandatory simultaneous use of hepatoprotectors with them.

6. LIST OF REFERENCES

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