The use and efficiency of autovaccines

1. Introduction

Chronic and recurrent infections of domestic animals are frequently found in the practice. Because of a long-lasting antibiotic treatment an increase of bacterial resistance is to be expected. One of the alternative methods of treatment is the use of autovaccines, which have been used successfully in human and veterinary medicine for a long time. Autovaccines are individual vaccines, especially made for the diseased animal from its own pathogens.

2. Preparation

The preparation of autovaccines requires a microbiological examination for the isolation of the causative pathogen. Then the bacterium has to be multiplied in pure culture and inactivated. The specific composition of the vaccine, like the concentration of the bacteria, the method and volume of application, is adapted to the preliminary report and the animal species. In general you have to differentiate between the local and systemic application of autovaccines. The subcutaneously given injection vaccines are recommended especially in skin diseases, mainly with *Staphylococcus intermedius*, in respiratory diseases, otitis, etc. In nasal or pharyngeal affections a preparation and application of the autovaccine as an aerosol is possible. Urogenital infections can be treated more effectively with both orally and systemically used combined vaccines. The oral vaccines can be used in all gastro-intestinal diseases associated with chronic diarrhoea. The intention of treatment is to sensitize the immune system against the causative pathogen or rather against its metabolites and to activate it to the production of specific antibodies. Thus the present infection will be controlled and a reinfection prevented.

3. Statistics

During May 2004 and December 2004 the success of autovaccinal treatment in 200 dogs and cats was quantified in a personal dialogue with the treating veterinarians. The interview usually took place one to two months after the end of therapy, so that relapses could be included in the analysis. 50% of the applied vaccines were oral vaccines used in chronic diarrhoea, 50% injection vaccines (42.5%) or combined vaccines (7.5%). The majority of the patients already showed a chronic or recurrent course of disease and thus had been treated more or less successful with antibiotics before.

4. Results of the oral vaccines

The main indication for the preparation of the 100 oral vaccines had been chronic diarrhoea and their secondary disorders (e.g. the affection to dermatitis and eczema). In 83% of the medicated animals the autovaccine showed a positive result after the end of treatment. Thereby 64% of the patients were completely healed, 19% showed a high improvement of the clinical symptoms. In 7% of the vaccinated animals a slight improvement was observed (fig. 1). 17.2% of the healed patients had a relapse after a variable period of time. Only 10% did not respond to treatment at all, 5% of these cats and dogs showed an underlying affection, which prevented the success of the autovaccine (food allergy, pancreatic insufficiency). While using the autovaccines, no adverse effects were noticed, neither by the pet owner nor by the treating veterinarian.
5. Results of injection vaccines and combined vaccines

The majority of the requests for injection vaccines accounted for the canine staphylococci dermatitis, followed by chronic respiratory infections. In this case the rate of success was about 75.3%. 14.1% of the vaccinated dogs and cats showed a slightly improvement of the clinical symptoms. 31.3% of the healed patients came down with a relapse after finishing the therapy of vaccination (fig. 2). The autovaccine remained unsuccessful in 10.6% of all patients, in 5.9% of these cases an additional underlying disease had been diagnosed (demodicosis, allergy). Adverse effects appeared in 8.2% of the treated animals. In this context, primarily slightly reactions like weariness and an increase in temperature were noticed, what in terms of activating the immune system is advantageous.

The combined vaccines showed as good results as the injection vaccines or the oral vaccines (data not shown).

6. Summary

The growing demand for the preparation of autovaccines, characterised by an increase of 35.8% during the last two years, already assumed the success of this method of treatment. By means of this statistic, the presumption had been confirmed. Especially in chronic infections with multiresistant bacteria or in cases of antibiotic failure, the application of an autovaccine should be considered. However, the autovaccine should not been regarded as an alternative to an antibiotic treatment but rather as a supporting measure. An important parameter for the effectiveness in addition to an exact diagnosis is the consistent compliance of the pet owner. Sometimes, especially in cases of pyoderma, the application of just one cycle of autovaccine is not sufficient. This is confirmed by our rate of relapses totalling 24.3%. On this account, a repetition of the autovaccine therapy at the first evidence of a relapse is absolutely advisable. In consideration of all mentioned factors, the autovaccine promises a high rate of success, resulting also in a positive relationship between veterinarian and pet owner.