DERMATOPHYTOSIS:
BASES FOR AN ADEQUATE RESPONSE TO THERAPY

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Fungal agents are transmitted by animal contact (with their infected hairs, scales or fungal elements), the environment (hairstash containing infectious arthrospores may remain infectious in the environment for many months, up to 18 in the case of \textit{M canis}), or by fomites. Rarely dermatophytosis in dogs and cats is caused by simultaneous infection with two different agents.

- Dermatophytosis is a disease that needs long therapy administration, the control of the factors related with the patient, control of all other animals related to the patient, treat the environment, and a cooperating owner. But not always is possible to obtain adequate results.

Diverse factors should be considered responsible for recurrence problems, chronic cases, and therapy failure:

Incorrect Diagnosis. This generally occurs when we use clinical signs alone to make diagnosis or Wood’s lamp examination for fluorescence without fungal cultures. Remember that only certain strains of \textit{Microsporum} and \textit{Trichophyton} produce a positive yellow-green color on infected hairs. Only about 50\% of \textit{M canis} infections fluoresce. Then important catch exists in the use and interpretation of Wood’s lamp. Fungal culture of affected hair and scale, and microscopic examination of hyphae and arthrospores are the most reliable diagnostic tests and is the way to identify the specific dermatophyte.

Inappropriate Systemic Therapy Administration. It is important to know the metabolism characteristics of antimiycotic drugs to be used in dermatophytosis therapy. For adequate activity it is necessary to know the doses, the frequency of administration, the secondary effects, and interactions with other drugs that could inhibit their activity. Inappropriate therapy including wrong drug or wrong dosage, or inadequate duration of therapy are very common failures. Griseofulvin oral absorption is increased in the presence of fat and it is metabolized six times faster in dogs and cats than in human beings (so higher doses than used in people are needed). \textit{Ketokonazol} gastro-intestinal absorption is favored in an acidic environment and inhibit by antacidic drugs, H2-blockers or omeprazol (concurrent use of cimetidine or ranitidine will decrease or inhibit absorption). \textit{Itraconazol} absorption is decreased when the stomach is less acidic, then should not be administer with antacids, H2-blockers or omeprazol, but oral capsules should be taken with food to increase absorption.

Failure to Use Topicals or Failure to Clip Hair Coat in long hair breeds

Reinfection. Normally occurs when the patient is exposed to a contaminated environment or other animals subclinically infected (currently assintomatic carrier cats). Them environmental decontamination is extremely important in the treatment process, as important is treat all animals involved in the outbreak.

Resistant Organisms. It is not know how often real resistance to antimicotic drug occurs. The majority of problems are related with how owners manage the affected patient. Therefor, in cases of suspicion on drug-intolerance, it should be investigated:

- If correct drug dose has been administrated,
- If adequate frequency and time of administration drug have been respected
- The inability to medicate the pet by the owner,
- The exposure to carriers,
- The existence of a contaminated environment,
- The existence of persistently asinthomatic infected cats

If after checking those aspects, we do not find any error, then it will be considered the possibility of a true dermatophyte resistance and we could introduce other antifungal therapy.

Drug Intolerance. In this situation, it should be considered changing to a divided dose schedule or to administrate a different drug.

Defective Immune System. Host ability to generate an inflammatory response and cell mediated immune response ability.

Existence of Underlying Diseases such as hyper-adrenocorticism, diabetes mellitus, FeLV infection, FIV infection, or cancer.

For an adequate follow up of dermatophyte therapy:

- Monitoring treatment. In a pet with competent immune system, dermatophyte infection could resolve without treatment within no more than 100 days and with topical and systemic treatment a marked improvement can show within four weeks after starting therapy. It should be performed cultures four weeks after initiating therapy and repeat every two weeks until first negative culture has been obtained. The treatment should be continued until that three negative cultures have been obtained in three consecutive weeks. In catteries it is advisable to culture environment before stopping therapy (performing toothbrush cultures of rooms, bedding, furniture and toys). In the case of doubts about the patient fungal status, it must be to continue treatment.
- Prevent reinfection. By control and culture all new pets came in to the household

REFERENCES