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Canine leishmaniasis in Constantine: Test of a therapeutic and Zyloric the Glucantime

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ABSTRACT

In this study, we report the results of a therapeutic trial of canine leishmaniasis with certain molecules (Glucantime and Zyloric). Canine medicine service of the Veterinary Institute of Constantine in collaboration with private veterinary practitioners has developed a test protocol therapy. This study involved 12 dogs divided into three lots, ranging in age from three years to nine years, of different sexes and different breed. The molecules are Glucantime tested at a dose of 80 mg per kg per day, subcutaneously morning and evening for 60 days, more Zyloric at a dose of 10 mg per kg per day orally (morning and evening). Of the 04 dogs treated, 03 were cured (75%). Then Zyloric (only) at a dose of 10 mg per kg per day orally, 2 times a day (morning and evening), 01 single dog is cured of the 05 treated (20%). Glucantime then only at a dose of 100 mg per kg per day subcutaneously every 48 hours for six months, no improvement on the 03 treated dogs (100% arrows). Efficiency in terms of clinical criteria confirmed by biological association Glucantime-Zyloric demonstrates an interest in relation to conventional therapy.

Key words: Dog, leishmaniasis, molecules

INTRODUCTION

The development of canine leishmaniasis in Algeria in recent years, allows us now to have many comments about it.

The first sighting was reported by Sergent brothers in 1910, Canine leishmaniasis is a growing concern for both our fellow vets for doctors, with a steady increase in the number of confirmed cases (1, 2), an extension area of focus, stable nature of the endemic area in which contamination is very important concern of doctors to the impact of human leishmaniasis and significant risks of occurrence of strains resistant parasites antimonates .

Canine leishmaniasis results in cutaneous and visceral clinical polymorphism. These clinical signs ranging from a few months to several years (3).

Specific treatments can often improve clinical leishmaniasis in dogs, but they do not eliminate the parasite carrying and contamination of sandfly vectors from canine reservoir, or prevent clinical relapses (4, 5). The dog is the main reservoir of visceral leishmaniasis in Mediterranean leishmanien Infantum (6).

The seroprevalence of canine leishmaniasis is 36.5% in Algeria (2).

In this study, we report the results of a therapeutic trial of canine leishmaniasis with certain molecule (Glucantime and Zyloric).

Recent years various molecules under different protocols have been used in dogs with varying degrees of success. Service canine Medicine Institute of Veterinary Science of Constantine in collaboration with private veterinary practitioners, focused on the problem of public health in order to develop a test protocol therapy.

MATERIALS AND METHODS

Dog:

-Dogs in this study Were Divided into three lots, thesis dogs are examined clinical medicine consultation services.

Diagnosis:

-Primarily based on clinical:

Study of 12 cases Were Divided into three lots. These dogs canine leishmaniasis Suspected Were Examined in consultation (medical service dog).

All animals of different breeds Were, gender and age of 03 ranks to 09 years.

1st Lot

Animal and pattem consultation	Seniority symptoms	Symptoms general	Signs and symptoms of skin or mucous various
Case 1: Shepherd male with 09 years squamosis seborrhea and marked on the head	2 months	Good condition with adenitis	Onychogriphose
Case 2: Setter male with 04years,asthenia,anemia and diarrhea	Symptoms for 06 months	Adenitis submaxillary fossa	Ulceration of the tongue,nodule on the back,onychogriphose
Case 3 : German Shepherd cross male 07 years malaise and generalized depilation	Since 01 year	Adenitis	Lip ulceration

2nd Lot

Case 4 :Boxer male 05 years of age adenitis generalized	Since 02 months	Good condition and adenitis widesread	Ulceration peri-ocular
Case 5 :Boxer female 03 years, poor general condition	Since 05 months	Weight loss,fever and adenitis	Depilation ulcerative truffe, nodules on the back, epistaxis and diarrhea
Case 6: German Shepherd male 04 years, back squamosis	Since 07 months	Asthenia and emaciation adenitis	Ulceration of the nose Onychogriphose bilateral keratitis
Case 7: Pointer female 05 years, presented a squamosis and hyper seborrhea marked on the back	Since 06 months	Adenitis widesread	Ulceration lip and Onychogriphose
Case 8: German shepherd cross, female 04 years withdevelopment of keratitis and iritis	Since 01 year	Good condition	Depilation and hyperkeratosis of the eyes, lips, nose and keratitis with iritis

3rd Lot

Animal pattern Consultation	Seniority symptoms	General symptoms	Symptom muco-cutaneous signs and symptoms of various
Case 9: Belgian Shepherd of 07 years	Since 05 months	Poor general condition Thinning and adenitis	Epistaxis and ulceration of the ears.
Case 10 :Setter male 04 years, asthenia and anemia, diarrhea	Since diarrhea 06 months	Adenitis	Lip ulceration
Case 11: German Shepherd cross male 06 years, malaise and generalized depilation	Since 07 months	Adenitis popliteal and axillary	Ulceration of the nose and epistaxis with diarrhea
Case 12: Boxer male 05 years	Since 01 year adenitis	Thinning	Nodules on the back.

On a clinical level, the animals examined had the most chronic form of canine leishmaniasis. Leishmaniasis in dogs typical or classic clinical signs can be grouped into:

General signs:

- Behavior modification:

-There is a loss of vitality and depression.

- Thinning
- Anemia

Signs-skin-mucosal (frequently constitute the reason for consultation).

-Depilation (usually diffuse especially on the head around the eyes, muzzle, ears ...)

- Hyperkeratosis
- Squamosis (the furfure leishmanien)
- Elongation claws (onychogriphose)
- Nodules, ulcers, skin and mucous membranes
- Violations of mononuclear macrophage system (MMS):

-The finding of organ involvement MMS (lymphadenopathy) a dog, must always suspect the evolution of leishmaniasis. Abdominal palpation, sometimes painful, may reveal an enlarged spleen and liver of varying intensity.

Once the clinical diagnosis is made, we realize the popliteal lymph node puncture in search of parasites and formo leuco-gel to refute or confirm our diagnosis.

Treatment protocol

Some molecules are tested for canine leishmaniasis (see Table I)

Table I List of leishmanicidal molecules

Active	Name	AMM Canine leishmaniasis
Meglumine antimoniate	Glucantime	+
Allopurinol	Zyloric	-

-The meglumine antimoniate is marketed in France under the name Glucantime ®. Laboratory indications advise a dose of 200-300 mg / kg every 48 hours by subcutaneous (SC), intramuscular (IM), intraperitoneal (IP) or intravenously (IV), series of 15 to 20 injections. Because some stibio-intolerance (digestive disorders, dizziness, muscle and joint pain:

Reversible events), not to say of nephrotoxicity (kidney, pancreas and heart). It is advisable to start with a lower dose half for the first injection and then gradually increase the dose. Various clinical and pharmacological studies now allow change, sometimes radically, some of the data (5, 7, 8].

The optimum daily dose (with demonstrated efficacy) is 100 mg / kg, can be divided into 2 (50 mg / kg / day (morning and evening) (9).

-The allopurinol has no MA in dogs and is used in humans for the treatment of gout (Zyloric ®). All protozoa are dependent on the parasitized host to acquire the necessary basis for their survival and multiplication as essential elements in the synthesis of ribonucleic acid allopurinol taking place and the prohibited bases normal synthesis of RNA and therefore has properties leishmanio-statiques confirmed in vitro and in vivo. Leishmanio-statique dose in dogs is 15 mg / kg, po, 2 times a day (morning and evening). (10, 11). No toxic effects were recorded in dogs at these doses if it is exceptionally photosensitivity skin lesions completely reversible upon discontinuation of therapy.

According to clinical criteria (weight loss, adenomegalies, skin lesions, geographical origin) usual or not (atypical), parasitology (highlighted in the parasite punctures ganglion, spinal cord or skin biopsies) and dogs are of various races, different sexes and with an average age of 03 ranks to 09 years.

RESULTS AND DISCUSSION

1st LOT

Glucantime ® 80 mg / kg / day, SC for a period of 60 days in combination with Zyloric ®, used at a dose of 10 mg / kg / day, po .2 times a day (morning and evening), showed some effectiveness after 60 days of treatment: -

Improved clinically significant, weight gain, recovery of appetite, but seems to have no effect on skin ulcers (clinical observation made in the clinical consultation, canine medicine department). (12).

The 4 treated dogs, 03 dogs were cured (75%) with a single failure 01 (25%) one relapse (25%).

No toxic effects were recorded in dogs at these doses if it is exceptionally photosensitivity skin lesions completely reversible upon discontinuation of therapy. (See Table 2).

2nd LOT

The Zyloric ® alone has yielded conflicting results on the 05 dogs treated dog is cured only 01 (20%) after 3 months of treatment without side effects. (See Table 2), with a number of failed 0 4 (80%), with January 1 dead dog (20%) and 03 dogs who have relapsed (60%).

3rd LOT

Glucantime ® alone, according to the manufacturer's instructions: 200 mg / kg SC every 48 hours, up to 3 months of treatment.

In our study we used Glucantime alone at a dose of 100 mg / kg SC every 48 hours in over 06 months; we have not recorded any improvement (see Table 2).

On March 3 dogs treated no cure, 100% failure.

In terms of clinical efficacy, confirmed by biological criteria, the association Glucantime ® - Zyloric ® thus demonstrates its relevance to the "standard treatment"

The number of treatment failures (deterioration of general condition, relapse or death) is greater in group 3 than in 2 (respectively 100% and 80%), greater in group 2 than in 1 (80 % and 25% respectively), in addition, the nature of the failure is not the same (death or relapse for groups 1 and 2).

Some significant benefits have been observed with this protocol.

The administration of Zyloric ® can be started from the first day, when the diagnostic confirmation. even if the state of the animal requires intensive therapeutic failure prohibits the administration of Glucantime ®
- The association of interest prophylactic obvious (13,14, 15).

Treatment (Glucantime ®, 40 mg / kg, IM, and 20 days Zyloric ® 20 mg / kg, po, 30 days) gives the following results (10).

Table 2 Results obtained using three different protocols in 12 dogs

Criteria	Lot 1	Lot 2	Lot 3
Number of dogs treated	4	5	3
Number of healing	3(75%)	1(20%)	0
Number of failures	1(25%)	4(80%)	3(100%)
Dead	0	1(20%)	
Relapses	1(25%)	3(60%)	
Poor general condition	0	0	

CONCLUSION

Despite these drawbacks and limitations, the association Glucantime ® - Zyloric ® remains, both in terms of therapeutic efficacy that strict prophylactic interest, the association most interesting. There should be more field studies, both epidemiological and clinical and serological to confirm the results, to define the optimum dose of prophylactic Zyloric ® after the course of treatment previously defined. Other protocols and other molecules are not compared to the previous undeniable advantages both in terms of effectiveness or ease of administration.

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