C0956 NONINVASIVE MOLECULAR DIAGNOSIS OF LEISHMANIASIS IN DOGS

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1 Background

The molecular diagnosis of leishmaniasis by PCR on limph node and bone marrow is accurate, but it is invasive; however, the lymph nodes regression after therapy makes difficult their collection.
Non-invasive sampling for parasite detection and quantitation is crucial for diagnosis and for monitoring Leishmania infection in dogs.
The object of the present study was to search for a noninvasive collection methods for detecting and quantitating Leishmania infantum DNA in saliva samples from naturally infected dogs living in endemic area, comparison to the performance of IFAT and lymph node aspirates, serum and congiuntival swab by real time PCR.

2 Methods

Leishmania infantum DNA detection was performed in biological sample from twenty dogs of different breeds and age, showing symptoms compatible with the infection, and fifteen leishmaniotic dogs undergoing antileishmanial treatments (meglumine antimoniate plus allopurinol/miltefosine plus allopurinol).

3 Results

The detection of Leishmania DNA in saliva samples by real time (qPCR) was possible in untreated dogs and after anti-Leishmania treatment.
The real-time PCR analysis showed higher levels of Leishmania DNA in the lymph node aspirates and saliva samples from all infected dogs than those measured in their congiuntival swab.

4 Conclusions

Overall, the results indicated that real time PCR-saliva is a new sensitive, non-invasive molecular method and could represent a good option for diagnosis of leishmaniasis in dogs and for monitoring infection in drugtreated dogs.