



Molecular detection of *Leishmania infantum* in cutaneous lesions of horses from endemic CanL areas of northern and central Italy: preliminary results

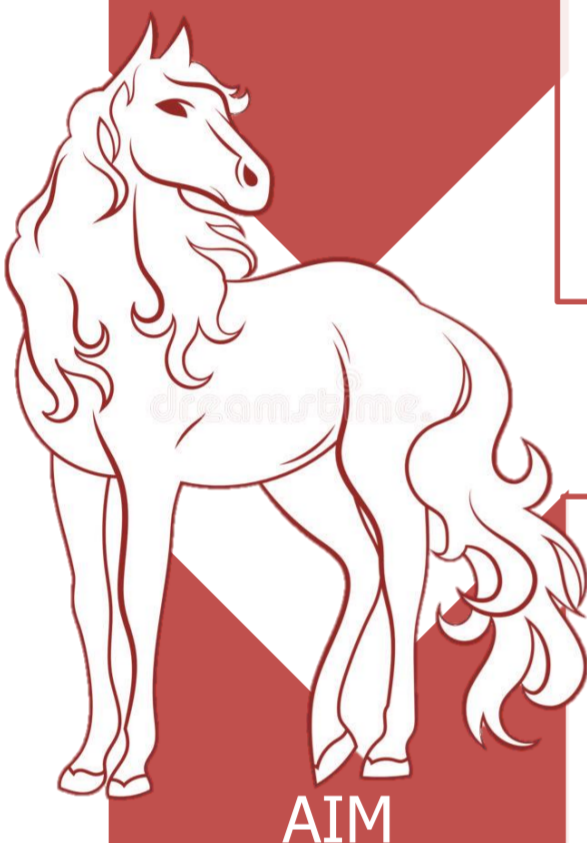


G MORGANTI¹, A GAZZONIS², P ROCCABIANCA², G AVALLONE³, G RIGAMONTI¹, C BRACHELENTE¹, M DIAFERIA¹, F VERONESI¹

¹ Department of Veterinary Medicine, University of Perugia, Italy; ² Department of Veterinary Medicine, University of Milan, Italy; ³ Department of Veterinary Medical Sciences, University of Bologna, Italy.

INTRODUCTION

- *Leishmania infantum* is a protozoan causing human zoonotic visceral leishmaniasis (ZVL) and visceral-cutaneous canine leishmaniasis (CanL) in the Mediterranean Basin. Besides dogs and cats, *L. infantum* may infect a large number of wild and livestock species, including horses, which could contribute as secondary hosts, reservoirs or just as good phlebotomine blood sources to the epidemiological scenario of the disease (Gazzonis et al., 2020). Since the nineties, both in the Old and New world, clinical cases of Equine Leishmaniasis (EL), typically characterized by papular and nodular skin lesions (Limeira et al., 2019), have been increasingly reported, and low to moderate sero-prevalence levels have been found in different regions of the Mediterranean area (including Italy).



AIM

- Aim of the present study was to evaluate the presence of lesions possibly associated to EL in endemic CanL areas of northern and central Italy as these areas were previously investigated by an extended serological survey (Gazzonis et al., 2020).



MATERIALS AND METHODS

- A retrospective study on overall 42 cutaneous biopsies (n. 20 from Perugia, n. 6 from Bologna, n. 16 from Milan) from horses with papular and/or nodular lesions, compatible with EL, was conducted. DNA was extracted from formalin-fixed paraffin-embedded samples and subjected to PCRs targeting a 120bp kinetoplast DNA and the internal transcribed spacer-1 (ITS-1) of ss-rRNA (Francino et al., 2006; El Tai et al., 2000). The amplified products were sequenced.

RESULTS AND CONCLUSIONS

- A single positive *L. infantum* case for the kinetoplast DNA target was found from the Bologna caseload. The horse had a nodular lesion on the face, near the right ear. The histological examination revealed a lymphoplasmacytic dermatitis. Pathological and healthy skin samples (the latter collected at necropsy from animals died from unrelated causes) should be investigated on a larger scale, also by using immunohistochemistry analysis, to provide information on the potential clinical impact of EL in the practice and the role of horses in the epidemiological ZVL and CanL scenario.

Bibliography: El Tai et al., 2000 Trans R Soc Trop Med Hyg. 94: 575-79; Francino et al., 2006 Vet Parasitol. 137: 214-21; Gazzonis et al., 2020 Parasit Vectors. 13; Limeira et al., 2019 Rev Bras Parasitol Vet. 28: 574-81.