CUTANEOUS LEISHMANIASIS IS FREQUENT IN EQUINES FROM AN ENDEMIC AREA IN RIO DE JANEIRO, BRAZIL

CRUZ MANUEL AGUILAR*, ELIZABETH FERREIRA RANGEL** & LEONIDAS M. DEANE**

In an endemic area of cutaneous leishmaniasis in Rio de Janeiro State where a mule had been found infected, a systematic search among equines was performed, resulting in the detection of Leishmania parasites in skin lesions of 30.8% of the animals, which included horses and mules. The eventual role of equines in the epidemiology of the human disease is being investigated.

Key words: cutaneous leishmaniasis - equines - Rio de Janeiro

In a previous note Aguilar & Rangel (1986) reported the natural infection of a mule, Equus caballus x Equus asinus, with leishmanial parasites in skin ulcers, in a locality — Mesquita, Nova Iguaçu municipality, Rio de Janeiro State —, where cases of human and canine cutaneous leishmaniasis are occurring. This finding led to a systematic search of skin leishmanial parasitism in the local equines, which are largely used by the dwellers in their farming activities.

All 26 equines in the locality were examined. They included horses, donkey and mules. Ten showed ulcerated areas in various parts of the body. Smears from the margins of the ulcers, obtained by biopsy, were fixed with methanol, stained with Giemsa's and examined microscopically.

Results are seen in the following Table:

Equines	Examined	With cutaneous lesions		With Leishmania parasites	
		No.	%	No.	%
Horses,					
Equus caballus	11	5	45.5	4	36.4
Donkey,					
Equus asinus	1		_	_	_
Mules,					
Equus caballus x Equus					
asinus	14	5	35.7	4	28.6
Total	26	10	38.5	8	30.8

Equine cutaneous leishmaniasis was first reported by Mazza (1927) in a horse in Argentina and later in a donkey, by Alencar (1959), in Ceará State, Brazil. More recently, parasitism of donkeys was seen to be frequent in Venezuela, where many of such animals were found infected in some states: in Lara, by Bonfante et al. (1979, 1981) and in Cojedes, by Aguilar (1985) and Aguilar et al. (1979, 1984). Still in Venezuela, other asinine infections were observed by Pons & Londres (1968) in Zulia State, by Scorza (1982) in Mérida and by Garcia (1985), in Cojedes. In Brazil, another infected donkey was discovered by Vexenat et al. (1986) in the State of Bahia and the first natural infection of a mule was the one detected by Aguilar and Rangel, mentioned above.

Equine cutaneous leishmaniasis has been regarded as occasional, except in Venezuela, where the systematic study of the donkey population in some areas has shown that among these animals the infection was even more frequent than among humans and dogs (Aguilar, 1985; Aguilar et al., 1984). The present report suggests that the situation in parts of Brazil may be similar to that in Venezuela, where isozyme analysis detected the same parasite subspecies — Leishmania braziliensis braziliensis — in donkey, dog and man (Aguilar et al., 1982; Aguilar, 1985).

Instituto Oswaldo Cruz, *Departamento de Medicina Tropical and **Departamento de Entomologia, Caixa Postal 926, 20001, Rio de Janeiro, RJ, Brasil.

We are now investigating the role of equine leishmaniasis in the epidemiology of the human disease in Mesquita.

RESUMO

O achado de uma mula infectada num foco endêmico de leishmaniose tegumentar no Rio de Janeiro, levou-nos a procurar sistematicamente infecções por Leishmania em equinos, resultando no encontro de 30,8% de parasitados, incluindo cavalos e mulas. A possibilidade de esses animais participarem da cadeia epidemiológica da leishmaniose humana está sendo investigada.

ACKNOWLEDGEMENTS

Thanks are due to Ricardo Lourenço-de-Oliveira, who called our attention to the ulcers found in one of the local equines, and to André Figuerêdo Barbosa, for technical help.

REFERENCES

- AGUILAR, C.M., 1985. Leishmaniasis tegumentária en los caserios Solano y Valle Hondo del Estado Cojedes. Participacion de los animales domésticos. Thesis, Universidad de Carabobo, Valencia, Venezuela, 108 pp.
- AGUILAR, C.M.; FERNANDEZ, R.; FERNANDEZ, E. & DEANE, L.M., 1979. Animales domésticos y leishmaniasis tegumentária americana. Acta. Cient. Venezol., 30 (Supl.): 121.
- AGUILAR, C.M.; FERNANDEZ, R.; FERNANDEZ, E. & DEANE, L.M., 1984. Study of an outbreak of cutaneous leishmaniasis in Venezuela. The role of domestic animals. Mem. Inst. Oswaldo Cruz, 79:181-195.
- AGUILAR, C.M.; MOMEN, H.; GRIMALDI F.O., G. & DEANE, L.M., 1982. Leish mania braziliensis braziliensis in donkeys, Equus asinus, in Central Venezuela. IX Reun. An. Pesq. Bás. Doença de Chagas, Caxambu, Abstracts, 120.
- AGUILAR, C.M. & RANGEL, E.F., 1986. Leishmaniose tegumentar em uma mula (Equus caballus x Equus asinus) em área endêmica no Estado do Rio de Janeiro. Mem. Inst. Oswaldo Cruz., 81:239-240.
- ALENCAR, J.E., 1959. Um caso de leishmaniose tegumentar em Aquus asinus. XVI Congr. Brasil. Hig., Niterói, Brasil (mimeographed).
- BONFANTE-GARRIDO, R.; MELÉNDEZ, E.; TORRES, R.; MORILLO, N.; ARREDONDO, C. & URDANETA, 1., 1979. Leishmaniasis equina en Venezuela. V Congr. Latino-Amer. Parasit., Buenos Aires, Abstracts, p. 237.
- BONFANTE-GARRIDO, R.; MELÉNDEZ, E.; TORRES, R.; MORILLO, N.; ARREDONDO, C. & URDANETA, I., 1981. Enzootic equine cutaneous leishmaniasis in Venezuela. Trans. R. Soc. Trop. Med. Hyg., 75:471.
- GARCIA, L., 1985. Personal information.
- MAZZA, S., 1927. Leishmaniasis cutánea en el caballo y nueva observacion de la misma en el perro. Bol. Inst. Clin. Quir., Argentina, 3:462-464.
- PONS, R.A. & LONDRES, H., 1968. Leishmaniasis tegumentária en el asentamiento campesino de Zipayare. Aspectos epidemiológicos, clínicos e inmunológicos. Su importancia en la Reforma Agrária. Kasmera, 3:5-59.
- SCORZA, J.V., 1982. Personal information.
- VEXENAT, J.A.; BARRETO, A.C.; ROSA, A.C.O.; SALES, C.C. & MAGALHÃES, A.V., 1986. Infecção natural de Equus asinus por Leishmania braziliensis braziliensis na Bahia, Brasil. Mem. Inst. Oswaldo Cruz, 81:237-238.