

BRIEF REPORT

REPORT ON A VISCERAL AND CUTANEOUS LEISHMANIASIS FOCUS IN THE TOWN OF JEQUIÉ, STATE OF BAHIA, BRAZIL.

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Human leishmaniasis are endemic diseases in many tropical areas of Central and South America (GRIMALDI et al., 1989), including foci in Brazil. In the State of Bahia, cases of both visceral and cutaneous leishmaniasis have occurred in the town of Jequié (authors' observation). The simultaneous occurrence of visceral and cutaneous forms in this focus motivated us to study its epidemiological features, in order to test the hypothesis of differential geographic distribution of these two leishmaniasis forms.

Jequié municipality has an area of 3,113 km², is situated 13°52' S and 40°4' W, at a distance of 112 km from Atlantic Ocean and is 216 m above sea level. It is a region of semi-arid tropical climate with an annual average temperature of 24°C and a rainfall of 500 mm. The natural predominant vegetation consists of deciduous small trees, shrubs, cactus and gramineous. However, some rural areas of the municipality are covered by tropical rain forest or secondary woodland, where rainfall is between 750 and 1,000 mm. The population was 144,572 inhabitants in the 1991 National Census, which approximately 21% live in rural areas (IBGE, 1993).

We revised the medical records of a total of 183 and 448 visceral and cutaneous leishmaniasis cases respectively, that had been diagnosed in Jequié between January 1989 and December 1991, and reported to the local Public Health board. Diagnose was based on clinical features, Montenegro's skin test and/or Immunofluorescence for anti-*Leishmania* antibodies.

As shown in Table 1, the three-years accumulated incidences of 130 and 317 (per 100,000) were estimated for visceral and cutaneous leishmaniasis respectively.

TABLE 1

Sex, age and geographic distribution of the visceral and cutaneous leishmaniasis cases in the town of Jequié, State of Bahia, Brazil (1989-1991).

		Number of cases	
		Visceral Leishmaniasis	Cutaneous Leishmaniasis
Total		183	448
Sex	Males	112 (61.2%)	279 (62.3%)
	Females	71 (38.8%)	169 (37.7%)
Age (years)	0-5	86 (47.0%)	40 (8.9%)
	6-10	47 (25.1%)	50 (11.2%)
	11-15	17 (9.8%)	77 (17.2%)
	16-20	12 (6.0%)	58 (13.0%)
Area	> 20	21 (11.4%)	223 (49.8%)
	Urban	157 (85.8%)	68 (15.2%)
	Rural	26 (14.2%)	380 (84.8%)
Three-years* Accumulated Incidence (per 100,000)	Urban	141	61
	Rural	88	1,280
	Total	130	317

* (Total number of cases/Total number of persons at risk) x10⁵, based on estimated population at July 1990.

Among the visceral leishmaniasis patients, 133 (72.7%) were 10 years old or younger, and 112 (61.2%) were males and 71 (38.8%) were females. This is in accordance with MAGALHÃES et al. (1980), who found in an endemic area of Minas Gerais State (Brazil) a similar picture: 77.4% of the patients were 10 years old or younger and 60.1% were males.

With regard to patients presenting cutaneous leishmaniasis, 358 (79.9%) were older than 10 years, and 279 (62.3%) were males and 169 (37.7%) were females. This age distribution is similar to that found in

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the Três Braços municipality, another focus of disease in Bahia State, situated at 100 km from Jequié, where 79.7% of patients were older than 9 years (LLANOS-CUENTAS et al., 1984). However, in Três Braços the incidence rates of disease were similar in both sexes. We suppose that in Jequié the higher incidence in men is probably due to their more frequent exposure to forest, which increases with the age.

The geographic distribution of patients indicates that visceral leishmaniasis is an urban disease in Jequié (85.8% of the patients). As *Leishmania chagasi* infected dogs and the vector *Lutzomyia longipalpis* have been found in the area (SILVA et al., manuscript in preparation), control strategies should be concentrated in urban/periurban areas by sacrificing infected dogs and spraying insecticides. Efficacy of these measures was proven in a similar Brazilian endemic area (ALENCAR, 1961).

On the other hand, we observed the cutaneous leishmaniasis as mostly occurring in rural areas (84.8% of the patients). The control will be more complex since most patients work in and/or live close to forest or woodland. Furthermore, the *Leishmania* species responsible for cutaneous disease have not yet been identified in this area, and we do not know which sandfly species are involved in transmission nor which animals are reservoirs. The cases of cutaneous leishmaniasis reported as being urban could indicate transmission in this habitat, similar to that described in two Brazilian metropolitan areas: Belo Horizonte (PASSOS et al., 1990) and Rio de Janeiro (OLIVEIRA-NETO et al., 1988). This hypothesis needs to be investigated further.

Although we have found some overlap in geographic distribution of visceral and cutaneous leishmaniasis cases, our findings support the initial hypothesis of differential distribution between urban and rural strata. Towards visceral disease, our current hypothesis is that habitat influence on vector population density

should be the key point in determining transmission, since that dogs, probably the *L. chagasi* principal reservoir in Jequié, are present in both geographic strata.

Jequié visceral and cutaneous leishmaniasis focus mentioned in this preliminary report is currently being investigated in order to determine parasite, vector and reservoir host relationships, and to develop suitable control measures.

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