



Letter to Editor/Carta ao Editor

Detection of clusters of leprosy cases among Guarani Indians in the Southern region of the State of Rio de Janeiro, Brazil

Detecção de aglomerado de casos de hanseníase entre indígenas da etnia Guarani no sul do Estado do Rio de Janeiro, Brasil

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Dear Editor,

The indigenous population living in communities in the State of Rio de Janeiro, Brazil, belongs to the Guarani ethnical group. It is distributed in five villages and two municipalities, Angra dos Reis (Sapukai village) and Paraty (Paraty-Mirim, Araponga, Rio Pequeno and Mamanguá villages). The villages have an irregular water supply, besides precarious sewage treatment and waste collection. The population comprises approximately 600 individuals, of which 55% are men and 40% are below age 10. The main source of income is handcraft. The Guarani are semi-nomad Indians, and the intense migration between villages pertaining to the same ethnical group is a cultural characteristic that increases their vulnerability to infectious and parasitic diseases (IPD). The migration occurs between several Brazilian states, especially those located in the south and southeast regions, and South American countries (Argentina, Paraguay and Uruguay), which enables them to maintain relationships with relatives living in other villages. This population has access to basic health care provided by a Multidisciplinary Team for Indigenous Health (*Equipe Multidisciplinar de Saúde Indígena* - EMSI), composed of medical doctors, nurses, dentists, nursing technicians, dental hygiene technicians, Indigenous Health Agents (*Agente Indígena de Saúde* - AIS) and Indigenous Sanitation Agents (*Agente Indígena de Saneamento* - AISAN). These teams are maintained by the National Health Foundation (*Fundação Nacional de Saúde* - FUNASA). Currently the Special Secretariat for Indigenous Health (*Secretaria Especial de Saúde Indígena* - SESAI) and the Angra dos Reis Health Foundation (*Fundação de Saúde de Angra dos Reis* - FUSAR) are responsible for providing health care to the indigenous peoples. Organized health services are offered on a permanent basis, but medical care also occurs by spontaneous demand.

Even though there is a decreasing trend in the number of new cases of leprosy in Brazil, high endemicity clusters are still present in

some areas of the country, especially in the North and Northeast^{1,2}. The high detection rate among individuals below age 15 and the presence of such clusters are indicators of active transmission³. Both the southeast region and the State of Rio de Janeiro show a decreasing rate of detection of new cases in a historic series spanning from 1997 to 2008². The Guarani Indians live in this area but no cases had been detected among them thus far.

In 2010, under FUNASA request and with the support of Oswaldo Cruz Foundation (*Fundação Oswaldo Cruz* - FIOCRUZ) and Carlos Chagas Filho Foundation for Research Support in the State of Rio de Janeiro (*Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro* - FAPERJ), a research was performed in five villages of the Guarani area to outline the epidemiological profile of infectious diseases. An active search for american cutaneous leishmaniasis, leprosy and intestinal protozoal and helminthic infections was performed. Three specialists in leprosy were assigned for two weeks to perform an in-depth physical test of the Indians. Seventy-five heads of families of all five Indian villages were first applied a specific questionnaire to assess their level of knowledge about the diseases at issue, before the families undergo physical examination.

In total 255 Guarani individuals were examined, 37.6% (96/255) in Sapukai, 42% (107/255) in Paraty Mirim, 9.4% (24/255) in Rio Pequeno, 7.5% (19/255) in Araponga and 3.5% (9/255) in Mamanguá. In the five villages 11 leprosy cases were diagnosed. Eight cases were detected in Sapukai village, two cases were detected in Paraty-Mirim and one was detected in Rio Pequeno. Of these cases, one was a multibacillary leprosy patient and one was an individual 12 years old. All cases were notified to the municipality of Angra dos Reis and treatment with multidrug therapy was initiated. Lack of knowledge about leprosy reached 86% among the 75 Indians interviewed.

Field work was somehow impaired in Sapukai village, due to the difficulties to involve the leaders to bring up their families to be examined and also to the heavy rains that hit the area during the field work. Unlike the experience in Sapukai, work performed in the Paraty villages was helped by the intense participation of the Indians and to the absence of rain.

Although the Guarani have permanent access to medical care and health professionals working in the villages had received specific training for leprosy, cases were not identified previously and our findings indicate the existence of a cluster of leprosy cases among that population. Additionally, the presence of a multibacillary individual

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and of another below age 15 are indicative of active infection among the Guarani Indians living in the Angra dos Reis and Paraty region at the moment of the study. Due to the frequent contact between the Indians and the non-Indian population around the villages, in a endemic area for Hansen's disease², cases were expected to be found among them. However, an active search was necessary for the identification of the cases. As they are semi-nomad, they could also have been infected in other areas of Brazil. However, Indians from the main affected village (Sapukai) usually migrate from the South Region of Brazil, an area considered of lower prevalence of leprosy². As not all individuals participated in the survey, it is important to identify all existing cases in the five villages, so we can have a real perspective of the cluster found and leprosy individuals are adequately treated. It should be said that the semi-nomad characteristic of the Guarani may lead to the dissemination of the disease to other Guarani areas in Brazil and abroad. In our opinion, these areas must be assessed for the occurrence of leprosy. Adequate training of indigenous health agents, nurse technicians and other EMSI members, as well as providing the Guarani with information about the disease are key preventive measures that must not be postponed so that leprosy can be controlled among Indians. This

is the right moment and the focus on clusters is in accordance with the policies of the Ministry of Health³ for leprosy, which state that combating clusters will help reduce even further the appearance of new cases of leprosy.

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