INTRODUCTION

In Amazonia Brazil, the distribution of visceral and cutaneous leishmaniasis focus is closely coexistent in some areas, although the visceral disease is more frequently associated to a peridomestics epidemiology, while cutaneous disease has a strong association to a silvatic condition. This situation promotes an early Leishmania chagasi infection in children, which in most cases results in a lasting asymptomatic infection by this parasite due to an efficient and specific cell-mediated immunity. In the other hand, cutaneous leishmaniasis has a multiple etiology and is commonly found in adult people working into the forests.

OBJECTIVE

This work aimed to investigate the cross-immunoprotection induced by asymptomatic L. chagasi infection against cutaneous leishmaniasis, particularly by L. braziliensis, in people living in overlapped focus with the two types of leishmaniasis.

MATERIALS AND METHODS

Patients: there were examined two cases of cutaneous leishmaniasis at the ambulatory of Leishmaniasis programme of the Evandro Chagas Institute (Surveylance Secretary of Health, Ministry of Health, Brazil), both without prior history of visceral disease and from the municipality of Igarapé-Miri, north of Para State, Brazil. They were 16 and 28 years old and each one had an ulcerated skin lesion with 8 and 12 months of evolution, cases 1 and 2, respectively (Figs. 1 and 2).

Laboratorial examination: 1) Punch biopsies were performed to provide material for isolation of the parasite following intradermal inoculation of triturated tissue into the feet of hamsters, and its cultivation in Difco B45 culture medium; 2) Identification of parasites isolated from the patients was based on the use of species-specific monoclonal antibodies against the Leishmania species from the Amazonian Brazil, and 3) To determine the cell-mediated immunity induced either by L. chagasi or by a dermotropic species we used a delayed hypersensitivity skin test (DTH) with a homologous antigen of L. chagasi and other with L. amazonensis, both with equivalent concentrations (10⁷ promastigotes/stacionary phase culture/ml).

Treatment: meglumine antimoniate by intravenous injection, 850 mg/Sb’/daily, 25 days, in two series with 10 days interval.

RESULTS

In both cases there was confirmed the leishmanial nature of cutaneous lesions, being identified Leishmania (Viannia) braziliensis as the causative parasite. The DTH reactions with L. chagasi antigen (14 and 9 mm) were in both cases higher than those with L. amazonensis antigen (8 and 5 mm), respectively, although the DTH skin reactions (14 and 8 mm) in the patient with active cutaneous leishmaniasis have been larger than those (9 and 5 mm) in the patient with older disease (3 years before) (Figs. 3 and 4). With respect to treatment, two series of meglumine antimoniate (850 mg/Sb’/daily, 25 days) were sufficient to heal both cases.

CONCLUSION

These results confirm that the cell-mediated immunity induced by an asymptomatic L. chagasi infection is unable to prevent the infection and the establishment of cutaneous leishmaniasis by L. braziliensis, although there have been observed a decrease in morbidity of disease in both cases, as that their cutaneous lesions did not develop as much as 20 mm diameter during long periods of 8 and 12 months evolution, respectively.