Letters

Predicting relapse after treatment for American cutaneous leishmaniasis

Editor – The paper by Passos et al. about prediction of relapse in patients with American cutaneous leishmaniasis identified a negative skin test to leishmanin as a significant prognostic factor in a cohort study that enrolled patients with cutaneous and mucosal disease (*1*). The study is important because of the scarcity of research on prognostic issues in cutaneous leishmaniasis, and because it constitutes probably the biggest cohort of American cutaneous leishmaniasis ever followed in Brazil. However, some points should be borne in mind regarding the case definition, performance of the leishmanin skin test, the potential role of *Leishmania (Leishmania) amazonensis* as an etiolological agent of cases in the cohort, and the absence of exact data about the total antimony dose administered.

The case definition was based on clinical evaluation and any of three diagnostic tests, none of which identified the parasite; this would be of crucial importance because of the possibility that long-term prognosis could be linked to parasite species (*2*). According to data from a previous report, the best estimate for the relative frequency of *L. (L.) amazonensis* in the clinical setting where the present cohort was followed was 7.5% (4/53 evaluated patients), but could be as high as 18.2% considering the 95% confidence interval (CI) calculated for those numbers (*3*).

The skin test was not as sensitive as expected for a population of patients mainly infected with *L. (Viannia) braziliensis* (*4*). The study showed that, as a best scenario, skin test sensitivity was 79% (95% CI: 74–83) if all patients with a positive skin test had a positive result in the other two tests in the inclusion criteria. The modest performance of leishmanin could be related to the potential role of *L. (L.) amazonensis* as an important etiological agent in the sample. Silveira et al. showed that the skin test has lower sensitivity in cutaneous leishmaniasis patients infected with *L. (L.) amazonensis* compared with those infected with *L. (V.) braziliensis* (*5*). These findings give rise to the hypothesis that *L. (L.) amazonensis* infected individuals have a higher chance of being classified as negative by skin test and that the predictive factor would be the parasite species. Although this hypothesis does not invalidate the predictive potential of the skin test, the external validity of the data could be sacrificed and the results applied just to samples with similar proportions of cases caused by the two cited species.

The procedure used to confirm the predictive capacity of the skin test did not include data of actual treatment duration or total antimony dose administered, only that doses were "at least" the standard therapy recommended by the Ministry of Health of Brazil. The relevance of that factor must be emphasized because the observed cure rate was high if we consider a sample mainly infected by *L. (V.) braziliensis*. Traditionally, *L. (V.) braziliensis* infection has been considered difficult to cure, specially the mucosal form of the disease (*6*), and the absence of data on treatment duration precluded the appropriate interpretation of the modelling to identify relapse predictors. Patients with higher relapse rates could be those treated with a significantly lower total dose of antimonial. Curiously, patients with mucosal disease showed a lower relapse rate compared with patients with cutaneous disease. The estimated relapse rate was 5.5% (95% CI: 0.14–27.3) and 10.3% (95% CI: 7.2–14.5) for mucosal and cutaneous disease respectively. Although the statistical treatment of those proportions does not show significant difference (mainly because of the small sample of patients with mucosal disease) the numbers observed justify the hypothesis that if patients with mucosal involvement were effectively treated with a higher total antimony dose it would explain the difference in the relapse rate, supporting the need to include an estimator of the magnitude of exposure to treatment in the model. ■

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Acute flaccid paralysis surveillance in Australia

Editor – In October 2000 the Western Pacific region of the World Health Organization (WHO) was certified free of circulating wild poliovirus (*1*). Australia had its last case of poliomyelitis due to wild poliovirus some time in the 1970s (*2*). However, being certified free of poliomyelitis depended on satisfying a number of criteria, one of which was adequate surveillance for acute flaccid paralysis (AFP) in children aged 0–15 years (*3*). AFP surveillance commenced in Australia in 1995 as a joint initiative of the Australian Paediatric Surveillance Unit (APSU) and the Commonwealth Department of Health (*4*), with the Victorian Infectious Diseases Reference Laboratory being responsible for virological surveillance.

The approach adopted in Australia has been presented in detail elsewhere (*4*) but is briefly outlined here. Any paediatrician seeing a patient aged 0–15 years, presenting with AFP, was

asked to notify the surveillance coordinator by telephone, to complete a detailed questionnaire and to arrange for the collection of two faecal samples 24 hours apart and within 14 days of the onset of paralysis. A follow-up questionnaire requested clinical details 60 days after the onset. In addition, all paediatricians in Australia were asked to indicate each month the number of patients seen with a range of rare conditions, including AFP, by returning a reply-paid survey card to the APSU.

Australia's population aged under 15 years was estimated as approximately 3 922 000 in 1999. To fulfil the WHO surveillance target of one AFP case per 100 000 population in this age group (*3*), Australia would have expected 38–40 AFP cases per year between 1995 and 1999. However, only 24–34 cases with sufficient information for classification by the polio expert committee were notified each year during this period. Adequate stool collection was documented for a maximum of 25% of cases in 1996. It was thus necessary to perform a series of retrospective hospital reviews in order to reach the expected number of AFP cases for Australia's certification requirements (*5*).

In 2000, staff at the Victorian Infectious Diseases Reference Laboratory undertook responsibility for AFP surveillance in conjunction with the APSU. Table 1 compares results with WHO surveillance targets: 48 cases were notified, of which 43 had sufficient clinical and virological information for classification as non-polio by the polio expert committee. More than 80% of notified cases had two questionnaires completed and/or two stool samples collected, though only 31% of all cases had two samples collected in the manner prescribed by WHO. However, significantly more of the cases with adequate stool samples were first notified by telephone to the AFP surveillance coordinator compared with notification through the routine monthly reporting system (56% compared with 12%, $P < 0.001$).

AFP case identification in excess of target levels has also been achieved in the first five months of 2001. Compared with 17 expected cases, 30 have been notified. To date, clinical information is available on 21 (70%) and at least one stool specimen has been collected on 20 (67%) of these.

Some industrialized countries, including France, the United Kingdom and the United States, do not routinely report AFP surveillance data and others fail to meet the WHO surveillance standards (*6*). In the year 2000, we have shown that a country with no proven polio case for more than 25 years has been able to find the expected number of AFP cases and investigate more than 80% of them. We believe that having responsibility for clinical and virological surveillance at one site has led to increased efficiency in both aspects of surveillance. Increased awareness by paediatricians of the causes of AFP, and the implications of AFP surveillance for WHO certification, may also have improved surveillance. We have demonstrated the importance of rapid notification for improving adequate faecal sampling. Since surveillance will be required until global certification and beyond, it is important that both non-endemic and recently endemic countries strive to achieve WHO surveillance targets for AFP.

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Table 1. **AFP surveillance in Australia, 2000**

WHO surveillance target	Indicator	AFP surveillance 2000
Non-polio AFP cases per 100 000 population aged less than 15 years	1/100 000 (40 cases)	1.2/100 000 (48 cases notified) 1.1/100 000 (43 cases with follow-up data)
Percentage of routine surveillance sites that provide routine reports (including zero reports) on time	>80%	98% of routine reports provided to the Australian Paediatric Surveillance Unit each month
Percentage of AFP cases that are investigated	>80%	88% completed first and second questionnaires and/or collected 2 faecal samples
Percentage of AFP cases that are investigated within 48 hours of notification	>80%	48% investigated for clinical details and stool collection within 48 hours of notification
Percentage of AFP cases with a follow-up examination for residual paralysis at 60 days after the onset of paralysis	>80%	88%
Percentage of AFP cases with 2 adequate stool samples	>80%	31%