The rough journey to access health care

The case of leishmaniasis in the Bolivian rainforest

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Care seeking behavior, intralesional pentavalent antimonials, economic analysis, cost analysis, budget impact analysis.

Keywords: cutaneous leishmaniasis, Health-care access, risk factors, population surveillance, capture-recapture, health care seeking behavior, intralesional pentavalent antimonials, economic analysis, cost analysis, budget impact analysis, Bolivia.

Abstract

Background Leishmaniasis is a parasitic infectious disease transmitted by vectors that cause three main clinical syndromes: cutaneous (CL), mucosal (ML), and visceral (VL). Since VL is not relevant to this thesis, only CL and ML will be further discussed. Leishmaniasis is present in 98 countries, with more than 350 million people at risk of infection. Leishmaniasis disproportionately affects poor countries and, in particular, remote areas where health services are weaker. Bolivia, a lower-middle-income country, is the fifth country with more cases in Latin America, and case detection and management is the main control strategy of the National Leishmaniasis Control Programme (NLCP). The NLCP provides free treatment to patients, which consists of systemic pentavalent antimonials (SPA) for 20 days. This treatment is highly toxic for patients and costly for the government, resulting in long periods of shortage of the drug. A good alternative to SPA is the use of intralesional pentavalent antimonials (ILPA), which are safer and have similar efficacy to SPA in treating CL. Case detection and management depend on a well-structured health-care system, and the primary level of care is responsible for this task in Bolivian endemic areas. It is well known that health-care access for leishmaniasis patients is limited but the extent and the determinant factors of this problem are unknown. The aim of this thesis is to assess health-care access among patients with leishmaniasis in a Bolivian rainforest rural area, addressing four specific questions: Who is most vulnerable to CL?; What is the extent of their lack of access to health care?; How do the dimensions of access and the quality of care influence health-care utilization in a context of vulnerability?; and how can a change in NLCP policy related to the treatment of CL improve the level of access to health care?

Methods This thesis is based on four studies that use quantitative and qualitative methods. Data collection was conducted through surveys, in-depth interviews and revision of official documents. Sub-study 1 was based on a cross-sectional study conducted in two communities of Cochabamba and assessed risk factors for CL using multivariate analysis. Sub-study 2 used the method of capture-recapture to assess the level of under-reporting of the national register for the period of 2013–2014, using Chapman’s formula. Sub-study 3 was conducted through in-depth interviews applied to 14 participants, using thematic analysis. Sub-study 4 was an economic evaluation that used data from surveys with physicians, official documents and key informants and compared the costs of systemic pentavalent antimonials (SPA) and intralesional pentavalent antimonials (ILPA) from the perspective of the Ministry of Health (MoH) and society. Additionally, a budget impact analysis of the implementation of ILPA in hypothetical scenarios of increasing level of demand was carried out.

Main findings Sub-study 1 showed that gender/sex was the only statistically significant factor associated with CL, with men being the most affected group. Other classical factors, such as animal ownership, house materials and protective measures were, however, not related to CL. Sub-study 2 revealed a high level of under-reporting (73%) of CL in the study area, and this under-reporting was higher among men compared to women. Sub-study 3 showed that the lack of availability, accessibility, affordability and quality of care were the main factors that limited the access to care of CL and ML patients. In sub-study 4, the economic analysis pointed out that the use of ILPA was cost-saving for the MoH and society, and the budget analysis confirmed that the implementation of ILPA as first-line treatment was not only cost-saving for the MoH, but it would also increase the number of patients accessing the treatment.

Conclusions The predominance of a sylvatic pattern of transmission, with men as the most affected group, demands new approaches to prevention related to occupational activities. The NLCP policy related to case management has been essential to reducing economic barriers for patients with leishmaniasis; however, there are still a considerable amount of cases who do not have access to the treatment. Lack of health services, equipment and drugs, as well as difficulties in reaching health services, the high costs of seeking health care and the low quality of care are important factors that must be addressed to fulfill the right to health care for these patients. Finally, new therapeutic alternatives, such as ILPA, must be considered to reduce problems of affordability, adherence, as well as side effects to the treatment. This information can be used to develop targeted interventions aimed at increasing the access to health care of people with leishmaniasis in the rainforest of Bolivia.

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