ORIGINAL ARTICLE

Evaluation of public policies effectiveness for the control of american tegumentary leishmaniasis in the city of Montes Claros – MG

Avaliação da efetividade das políticas públicas de controle da leishmaniose tegumentar americana no município de Montes Claros – MG

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ABSTRACT

This was a qualitative approach study, of the phenomenological and cross-sectional type with 15 health professionals who work in public hospitals, basic health units, and center for zoonosis and epidemiological surveillance. These professionals responded to a semi-structured interview designed to evaluate the perception of employees about the policies for the control of American Tegumentary Leishmaniasis (ATL). The data were subjected to content analysis under the following categories: ATL knowledge and priority in the municipality, its incidence and diagnosis, development of actions for control, approach strategies, decentralization of services, and assigned resources for its control. The majority of respondents considered that priority is given to ATL, which has increased in incidence; however, the professionals do not know how to diagnose it. There was disagreement about the development of control actions; seven reported having not developed them, and seven reported that they existed. However, most considered them not satisfactory. There was no consensus about the de-centralization of control services, and the majority of respondents indicated that human and material resources are insufficient.

Key words: Leishmaniasis, Cutaneous; Leishmaniasis, Cutaneous/economics; Leishmaniasis, Cutaneous/prevention & control; Public Policy; Public Health Policy; Health Services Administration.

RESUMO

Trata-se de estudo de abordagem qualitativa, do tipo fenomenológico e transversal, cuja amostra é constituída por 15 profissionais de saúde que atuam em hospitais públicos, unidades básicas de saúde, centro de zoonoses e vigilância epidemiológica, os quais responderam à entrevista semiestruturada, destinada a conhecer a percepção dos funcionários sobre as políticas de controle da leishmaniose tegumentar americana (LTA). Os dados obtidos foram submetidos à análise de conteúdo, sob a perspectiva das seguintes categorias: conhecimento e prioridade atribuída no município à LTA, sua incidência e diagnóstico, desenvolvimento de ações para seu controle, estratégias para sua abordagem, descentralização dos serviços e recursos destinados ao seu controle. A maioria dos entrevistados considerou que é atribuída prioridade à LTA, que se verificou aumento da sua incidência, mas os profissionais não a sabem diagnosticar. Houve divergência quanto à opinião sobre o desenvolvimento de ações de controle, sendo que sete referiram que não as desenvolveram e sete que existiam, mas a maioria as considerou não satisfatórias. Não houve consenso quanto à descentralização dos serviços de controle e a maioria dos entrevistados indicou que os recursos humanos e materiais são insuficientes.

Palavras-chave: *Leishmaniose Cutânea; Leishmaniose Cutânea/economia; Leishmaniose Cutânea/prevenção & controle; Políticas Públicas; Políticas Públicas de Saúde; Administração de Serviços de Saúde.*

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INTRODUCTION

American tegumentary leishmaniasis (ATL) is an infectious disease of the skin and mucous membranes, whose etiologic agent is a protozoan of the genus *Leishmania*.[1]

Over the years, ATL has behaved like a classically occupational disease, typically affecting adult men exposed to woodlands. However, changes about its epidemiological behavior has been observed in the recent decades in the face of extensive urbanization processes, with increasing involvement of women and children.[2]

Between 1999 and 2008, 269,122 ATL cases were recorded with an annual average of 26,912 episodes. It occurs predominantly in adult males, although recently increased involvement of children of both genders has been documented.[1]

In the State of Minas Gerais, ATL is currently present in virtually all municipalities in areas where roads and hydroelectric plants were built and where groups of people have settled. In addition to its continued presence in ancient endemic foci in the Atlantic Forest and the Doce and Mucuri River valleys, numerous cases have also been reported in urban areas of large and medium-sized cities such as Belo Horizonte, Montes Claros, and Governador Valadares.[3]

The Brazilian SUS associate the territorial perspective to the policy of decentralization through the strategy of regionalization of health actions and services. Therefore, it is set up as a health system organization project that should be, at the same time, unified, decentralized, and hierarchical throughout the national territory, assisting the country's regional diversity. This model has as its ultimate goal the expansion of access to health care (universality and comprehensiveness), attention to local needs, social participation, and efficient use of resources.[4]

In Brazil, the reorganization of actions at the local level did not occur homogeneously. First, due to the small size of most municipalities that faced difficulties in planning and organizing their systems; then, due to the uneven distribution of human resources and installed capacity. Finally, due to characteristics of municipal governments and management of local systems.[5]

An obstacle to the broad use of evaluation in the decision-making process in health care is that its implementation requires time and resources, which hinders its use to solve problems that require immediate solutions. In these situations, which are common when it comes to the health of people and populations, only the existence of accumulated knowledge as a result of past or previously planned evaluations, can contribute to the decision-making process.[6]

Based on data analysis of the new feature of urbanization presentation of diseases, the local epidemiology profile of tegumentary leishmaniasis and main risk factors that are associated with the appearance of cases (such as increased deforestation), it is verified that the absence of an efficient planning geared to the most practical management for the disease is contributing negatively. This favors the onset of epidemic outbreaks that endanger the population's health and quality of life in the studied area.

Economic and social problems arising from the lack of public policies to resolve environmental and health problems are of great importance. It is this context that the data is made available to the Health Department of the Montes Claros region, thus, one can assess closely the relationship between management and ATL. Attention should be given to this disease with dermatological importance and high rates of hospitalization due to infection and even deaths, and is unfortunately little studied by competent fields. One should also contribute to providing awareness to the affected population about its risks. ATL economic assessment studies are rare in the literature; there is no study applied to the study area.

This study arises from this context of concern: to evaluate the effectiveness of control measures of ATL instituted in the municipality of Montes Claros and addressed to the population living in areas with the risk of acquiring this disease in 2012.

MATERIAL AND METHODS

The municipality of Montes Claros is located in the northern region of Minas Gerais State, in the basin of the Upper East São Francisco River, in the "Drought Polygon" area. The climate is tropical semi-humid with an average temperature around 25 °C, and a prolonged dry season (approximately five months/year). Climatological data indicate annual rainfall around 520 mm, with rainfall between October and March, and relative humidity ranging from 52-80% .[7]

Three procedures used were: bibliographic, documentary, and field sources. This was a qualitative evaluation study. The inclusion criteria were:

- to exercise professional activity in healthcare;

- to be involved in any process of prevention, diagnosis, treatment, and control of ATL;
- to accept participation in the study after signing the Voluntary Informed Consent Form.

The exclusion criteria referred to refusal to participate in the study at the time of data collection. Professionals, commonly working with disease notification (information system), exclusively with the SINAN, and in the epidemiology sector were excluded.

The study was approved by the CEP FIP/MOC – Brazil Platform, with the opinion no. 221 789.

RESULTS AND DISCUSSION

Sample characterization

Table 1.

Knowledge of respondents about ATL and priority given to the disease

The first question was: Have you ever heard of ATL? All respondents answered "yes."

The second question was: What is your opinion about the priority given to ATL in the health situation of the municipality? The 12 respondents answered "yes," recognized the disease as of great importance for the city of Montes Claros; the most suggestive example was the quote from interviewee E8:

> *"Yes, because it is a disease that can affect an entire population if there is no monitoring."*

Of those interviewed, three were of the opinion that priority is not given to ATL, justifying this trend by the existence of more serious illness that require more attention. This is the case of interviewee E10, whose quote follows:

> *"Priority is not given because there would be other diseases of higher interest. ATL would not be the main disease of the municipality, there are other diseases that need more care, more priorities."*

The three answers of low priority can be explained by the negligence in combating the disease. Hotez et al.[8] consider that several of the most important neglected tropical diseases (NTDs) in the world occur in Brazil. However, the importance attributed to these diseases differs by region. The number of humans compromised by NTDs is higher in areas with high poverty. There is a direct relationship between the prevalence of these diseases and the human development index (HDI). There is a high prevalence of NTDs in Brazil, and most of them occur in poor regions, mainly in the North and Northwest of the country.

Table 1 - Characterization of the interviewee sample in 2012 in the municipality of Montes Claros, Minas Gerais

Interviewee	Gender	Age	Education	Profession	Profession category	Professional time
1	F	30	College	Nursing	UBS Nurse*	4 years
2	F	30	High school	Nursing tech-nician	UBS Nursing Tech	6 years
3	M	52	High school	Community agent	Zoonoses Community agent	15 years
4	F	28	High school	Nursing tech-nician	Hospital Nur-sing Tech	2 years
5	F	36	High school	Nursing tech-nician	UBS Nursing Tech	3 years
6	F	25	College	Nursing	Hospital Nur-se	11 months
7	F	22	College	Nursing	UBS Nurse	4 months
8	F	32	High school	Nursing tech-nician	Nursing Tech in the ES sector**	3 years
9	F	51	College	Nursing	Health sur-veillance di-rector	12 years
10	M	35	College	Biologist	ES Coordina-tor	3 years
11	F	27	College	Nursing	UBS Nurse	3 years
12	F	25	College	Medicine	UBS MD	8 months
13	M	28	Graduate school	Nursing	UBS Nurse	5 years
14	F	36	College	Nursing	Hospital Nur-se	12 years
15	M	28	College	Nursing	Hospital Nur-se	7 years

Source: According to interview information; *UBS: Basic Health Unit. **ES: Epidemiological Surveillance.

Malaria, Chagas disease, leishmaniasis, schistosomiasis, dengue, leprosy, onchocerciasis, and lymphatic filariasis are the NTDs with the highest prevalence rates.

The disease incidence in Montes Claros

After being questioned about the evolution of the disease in Montes Claros, all participants, except one, considered the increased incidence of ATL and its urbanization in the area of research. Among the reasons that may explain urbanization, they mentioned: deforestation, migration, highway construction, immediacy of households with the forest, forest invasion, vector dislocation, phlebotomus difficulty in finding nutrients, lack of vector control, poor sanitation, lack of basic structure, lack of structure of households, and practice of sports such as scaling, tracking, and fishing.

The E8 interviewee explains:

> *"That it evolved this is a fact! Before, it was more rural, but going into the city, it is very urban. This occurred due to deforestation because the vector is a mosquito with a rural habit; and as the city expanded a lot, the urbanization began."*

The studied region presents essential conditions for increasing the number of ATL cases and. Therefore, the disease incidence has effectively increased.

According to Viana et al.[9], the situation of poverty and deficiencies in basic sanitation may be leading to a new and worrisome pattern of disease transmission with endemic characteristics, for which, health facilities must be prepared.

Disease diagnostic

When questioned if they believe that health professionals are able to identify cases of ATL, respondents had two types of responses: eight responded that they do not know how to diagnose cases of ATL, as explained by interviewee E9:

> *"Professional training lacks and needs to improve. The graduation of such personnel also needs to improve. Doctors make too many mistakes; they are falling short in diagnosis and treatment."*

On the other hand, out of the seven respondents who answered that professionals are able to diagnose the disease, two of them warn about the lack of reporting, as stated by interviewee E11:

> *"Yes (they are able to identify), but many do not report cases, which hinders the action of the epidemiological surveillance in endemic areas."*

An early and effective diagnosis is important for healing leishmaniotic lesions and knowledge about the disease. According to Pellissari et al..[10], especially early diagnosis of cases and timely treatment becomes necessary to reduce the lethality resulting from these diseases.

Control actions and their effectiveness

When asked about the development of control measures for the disease and what those actions would be, seven respondents answered that their sector do not develop these actions, as stated by interviewee E15:

> *"No! In practice, we do not see activities that prioritize the control of ATL."*

The seven respondents who mentioned that there are control measures in place indicated following up cases and ATL surveillance program as examples of those actions:

> *"Yes, following up cases from the time the patient is affected by the disease to cure" (E8).*

Two of these respondents also gave their opinion about the effectiveness of these actions citing the Zoonoses Center as a control measure undertaken by the municipality, as illustrated by interviewee E3:

> *"[…] The Zoonoses work on the methodology recommended by the Ministry of Health and health does not determine that the Zoonoses Center control ATL […] It states that we do control visceral leishmaniasis […]".*

It is clear, therefore, that these actions are not to control the disease, with a preventive aspect, but they are curative actions, bringing some reflections on the bad use of public resources still linked to the curative model to the detriment of the preventive and control proposal. The Zoonosis Center, which is the sector enabled to execute control measures for vector-borne diseases, such as ATL, in turn does not employ actions to control ATL, but only to the visceral form.

According to the Ministry of Health[11], ATL is endemic and presents great diversity and constant changes in epidemiological transmission patterns, considering the different species of vectors, reservoirs, and etiological agents associated with the action of man on the environment, hampering control measures. Control strategies should be specific and according to the epidemiological situation of each locality and region. The study of the largest number of suspected cases, identification of current etiologic agents and predominant vector, knowledge of areas where transmission is occurring, and reduction of man-vector contact through specific measures are of fundamental importance.

Degree of participation in the discussion and definition of control actions towards american tegumentary leishmaniasis

As for the involvement of management in the discussion and definitions of actions to control ATL, the analysis of the interviewees' discourse show that most of them are not part of management positions; three have played managerial positions, and after this question, E8 interviewee explained his perspective on the actions of managers:

> *"The health coordinator goes to meetings. I already participated in a project at about VL, but none about ATL."*

The health surveillance is aimed at observing and performing a permanent analysis of the population's health situation, articulating actions to control determinants, risks, and damage to the health of people living in certain territories, ensuring comprehensive care, which includes both an individual and collective approach to health problems.[12]

Evaluation of control actions by the Basic Health Units (UBSs)

We investigated the evaluations of respondents about the Basic Health Units (UBSs) in primary care in the fight and control of ATL; we verified that nine answers were directed to the 'not satisfactory' as illustrated by the E6 interviewee:

> *"Lack of awareness and knowledge of their own health professionals."*

Two respondents could not answer, and four considered the UBS's actions satisfactory, explaining this alternative by the action of surveillance and assistance as demonstrated by E8 interviewee:

> *"A very important work it is been done in this regard with respect to surveillance and assistance."*

This finding suggests that UBSs are not equipped to diagnose and treat ATL patients. According to Viana et al..[8], the region of Montes Claros presents ATL endemic features, and therefore, health facilities must be prepared for the diagnosis and treatment of the disease.

Involvement of health workers in the control of american tegumentary leishmaniasis

When asked if municipal health professionals promote control measures for ATL, seven answered no, as evidenced by the following quote:

> *"No! The involvement is more with visceral leishmaniasis, we hardly hear about the tegumentary form, perhaps people do not even know the severity of the disease […] … More involvement is lacking (E15).*

For six respondents, there is control, as explained by Interviewee 11:

> *"Yes (there is control), an example are the health workers and control of zoonoses."*

The answer to this question from two respondents were not clear, however, again, those who responded exposed concerned about visceral leishmaniasis and not ATL. According to Lima et, al..[10] professionals from UBSs may not be vigilant to indications in the ATL Control Manual.

Strategies used to control ATL

When asked about the strategies used to control ATL, four participants reported that information ac-

tions are not conducted, and six reported that the information provided is insufficient because there are only control strategies for visceral leishmaniasis, as stated by interviewee E4:

> *"The few strategies are not aimed at ATL, only visceral."*

For four participants, the answer was 'sufficient':

> *"Through training, informing how to identify the disease" (E5).*

One of the respondents could not answer this question and most of the participants mentioned information measures and strategies only for VL. The Ministry of Health attaches education measures to both VL and ATL.

The lack of knowledge by the population is aggravating in the control of the disease. According to Sampaio et al.[13], the epidemiological importance of leishmaniasis in public health demands the development and production of cheaper drugs to treat them. Several factors make it difficult to control these diseases: lack of vaccines, a wide variety of species of Leishmania and phlebotomus, and lack of awareness and prevention of the disease by the population, among others.

Human, material, and monetary resources for the control of ATL

When asked if the human and material resources involved in the control of ATL were sufficient, 11 participants indicated insufficiency in these resources:

> *"We lack printed material, increased training, I think that placing up posters in the area and information in the media are lacking" (E1).*

For two participants, the resources were sufficient, noting that:

> *"I guess so. They do a good job in the area"(E5).*

Finally, participants were asked about their knowledge of the amount allocated by the government for the control of ATL in the municipality of Montes Claros. Almost all participants could not answer this question and, according to one interviewee (9), who responded the question, the amount allocated by the government was not specific to the control of ATL:

> *"There is no specific resource use for the control of ATL. In a final project for VL, we received 300,000.00. The resources are general to health, to combat all transmissible diseases, leishmaniasis included, all […] They are now waking up to ATL. The number of cases is increasing a lot, but for now, there is nothing specific."*

Once a health region is demarcated according to the established criteria, the analysis of the population's needs for actions based on existing resources is included. These resources interfere with the risk of occurrence of various diseases or their harmful effects.[14] ATL does not present specific resource for the control of harmful effects.

CONCLUSION

It is noted that ATL is a health priority in the municipality in most cases. However, one can conclude that there are cases that seem to suggest negligence on its control, with priority given to other diseases such as meningitis, dengue fever, and hepatitis.

Virtually all respondents agree with the official statistics of the disease's incidence and its evolution, indicating that it has increased and become urbanized. Respondents also mention a set of factors that have contributed to the disease urbanization such as severe deforestation in the Montes Claros region, constant migration, practice of sports and leisure nearby forest areas, and construction of homes and villas adjacent to the forest.

The opinion of respondents leans to the lack of competence of health professionals in diagnosing the disease by citing the existence of underreporting of cases.

It is also noted that ATL control actions in the municipality are held with acting surveillance including the early detection of cases and/or monitoring of patients. It is understood, therefore, that these actions are not to control the disease or have a preventive nature, but they represent curative actions, raising questions about the archaic way of using resources in a curative order and not controlling or preventing dis-

eases. The Zoonosis Center was also cited by some participants; however, reports indicate the control of zoonoses only for visceral leishmaniasis.

The UBSs, are mostly inefficient and not prepared for the diagnosis and treatment of patients; health professionals might not know about control measures for ATL.

The strategies used in controlling ATL are restricted to information dissemination activities about the disease; however, they are insufficient to meet the population's needs. In some cases, the information sessions about the disease are lacking.

The evaluation of the degree of participation in the discussion and definition of ATL control actions showed that participation is not part of the experience of all managers who develop this activity in this area.

It was also found that human and material resources involved in controlling the disease are considered insufficient, and funds allocated to ATL are not designed specifically for this disease. In addition to human resources, the lack of other resources were identified such as printed material, posters, access to updated information, equipment, medicines, and transportation.

The respondents show awareness of the deficiencies in the public health services for ATL and the need for adjustments and significant improvements, both in direct patient care and forms of organizing, structuring and operating network services to assist ATL patients. Therefore, it is expected that municipal managers, the community, and professionals seek ways to transform this reality.

In light of these findings, we propose a set of suggestions to improve the effectiveness and efficiency of ATL control actions:

- to increase actions of disclosure on forms of disease prevention, treatment, and control to provide awareness and knowledge for the development agents and forms of ATL prevention;
- creating effective public policies to combat misinformation, especially by the primary health care, which is the great and main ally of ATL programs for prevention and dissemination of such information;
- to provide more human resources to enhance the educational and media that increase their mobility and approach people;
- to diversify disease control strategies in addition to information such as early detection of cases and adequate sanitation;
- to encourage training programs for health professionals specialized in disease control measures;
- activation of services in UBSs for ATL as one of the possibilities for improvement in patient care because clinical receptivity in neighborhoods close to residents is a powerful tool that links diagnosis to early and appropriate treatment;
- creation of a reference center for Leishmaniasis.

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