ORIGINAL ARTICLE

Physical disabilities after multidrug therapy for leprosy in Vitória da Conquista, Bahia State, Brazil

Incapacidades físicas em pessoas que concluíram a poliquimioterapia para hanseníase em Vitória da Conquista, Bahia, Brasil

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ABSTRACT

Objective: To estimate the prevalence of physical disabilities and associated factors in people who completed multidrug therapy (MDT) for leprosy. **Methods:** A cross-sectional study (n = 222) was conducted in Vitória da Conquista-Bahia-Brazil, including cases of leprosy reported from 2001-2014. Physical disabilities were assessed by means of instrument application and assessment of degree of disability (GI) and eye-hand-foot score (OMP). **Results:** The prevalence of physical disabilities was 64.8% (n = 144), and GI 2 was 17.1% (n = 38). Physical disabilities were significantly associated with illiteracy (PR = 1.27; 95% CI = 1.05–1.54), multibacillary operating classification (PR = 1.26; 95% CI = 1.01–1.57), occurrence of reaction episodes (PR = 1.41; 95% CI = 1.14–1.74) and neural pain/thickening (PR = 1.3; 95% CI = 1.02–1.64). GI worsened in 34 (32.1%) cases, considering the time of diagnosis at discharge. **Conclusions:** Physical disabilities, including those with deformities, constitute an important problem in the individual and collective context of cases following post-discharge of MDT. It is highlighted the need for greater monitoring and longitudinal care, in order to prevent specific sequelae of the disease.

Keywords: Disabled Persons, Neglected Diseases, Leprosy

RESUMO

Objetivo: Estimar a prevalência de incapacidades físicas e fatores associados, em pessoas que concluíram a poliquimioterapia (PQT) para hanseníase. **Métodos:** Realizou-se estudo transversal (n=222) no município de Vitória da Conquista-Bahia-Brasil, incluindo casos de hanseníase notificados de 2001-2014. As incapacidades físicas foram avaliadas por meio de aplicação de instrumento e avaliação do grau de incapacidade (GI) e do escore olho-mão-pé (OMP). **Resultados:** A prevalência de incapacidades físicas foi de 64,8% (n=144), e de GI 2 foi de 17,1% (n=38). As incapacidades físicas associaram-se de forma significante com analfabetismo (RP = 1,27; IC 95% = 1,05–1,54), classificação operacional multibacilar (RP = 1,26; IC 95% = 1,01–1,57), ocorrência de episódios reacionais (RP =1,41; IC 95% = 1,14–1,74) e dor/espessamento neural (RP = 1,3; IC 95% = 1,02–1,64). Houve piora do GI em 34 (32,1%) dos casos, considerando o momento do diagnóstico à alta. **Conclusões:** As incapacidades físicas, inclusive as com deformidades, constituem um importante problema no contexto individual e coletivo dos casos que seguem no pós-alta da PQT. Ressalta-se a necessitando de maior monitoramento e cuidado longitudinal, no sentido de prevenir sequelas específicas da doença.

Palavras-chave: Pessoas com Deficiência, Doenças Negligenciadas, Hanseníase

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INTRODUCTION

Leprosy remains a major public health problem in many endemic countries, including Brazil. In 2016, 11.7% of the 214,783 new cases worldwide were diagnosed in the country, making it the second largest in absolute case numbers worldwide.[1]

The detection rate of leprosy in Brazil in 2016 was 12.23 cases/100,000 inhabitants, considered of high endemicity. The state of Bahia and the municipality of Vitória da Conquista presented an even higher standard, with coefficients of 13.59 and 15.02 /100,000, respectively.[2]

Without specific treatment leprosy can lead to permanent physical disabilities.[3] The degree of disability (DD) is an epidemiological and operational indicator that briefly describes the presence of physical disabilities resulting from the disease.[4,5] In Vitória da Conquista, the detection rate of physical disability grade 2 in new cases was 1.73/100,000 inhabitants and, as the general detection coefficient, is above the average found in the state (0.62/100,000 inhabitants) and in Brazil (0.84/100,000 inhabitants).[2]

The eye-hand-foot (EHF) score is a complementary tool to the DD, resulting from the sum of the DDs attributed to the eyes, hands and feet. Both measurement mechanisms should be employed in identifying and monitoring the development of physical disabilities at the time of diagnosis, discharge and after completion of multidrug therapy (MDT).[6,7]

However, in the reality of some health services, DD registration occurs only during the MDT period.[8,9] This finding demonstrates important programmatic failures to comply with control actions at different levels of the health system. These problems of operationalizing the actions of the leprosy program compromise the systematic follow-up and the provision of comprehensive care that includes preventive and rehabilitation follow-up for those who have completed MDT.[10,11]

Although they are cured of Mycobacterium leprae infection, people in post-discharge leprosy need greater visibility in health services, while they have specific demands arising from the chronicity of the disease and higher risk of developing physical disabilities.[12,13] It is relevant to identify possible factors associated with the occurrence of neural alterations and physical disabilities, since these data help in planning actions that prioritize their treatment and follow-up.[14] Surveillance of the clinical condition of people at the time of leprosy post-discharge is systematically important, regardless of installed disability, with a broad approach in the physical, psychological and social aspects.[8,15,16,17]

OBJECTIVE

This study characterized the pattern and evolution of neural damage, identifying factors associated with the development of physical disabilities in people who completed MDT for leprosy in the municipality of Vitória da Conquista-Bahia, from 2001 to 2014.

METHODS

A cross-sectional census study was conducted in the city of Vitória da Conquista, located in the southwest region of the state of Bahia. The municipality has a territorial area of 3,704 km², with an estimated population of 343,230 inhabitants.[18] In 2015, it presented Gross Domestic Product (GDP) of R $ 3,491,076, per capita income of R $ 1,117 and an average Municipal Human Development Index (MHDI) of 0.678.[18,19] It has the Department of Sanitary Tisiology and Dermatology, whose proposal is focused on the prevention, care and diagnosis of tuberculosis, leprosy and leishmaniasis.[20]

The target population consisted of all new leprosy cases diagnosed between 2001 and 2014 that completed MDT and still residing in Vitória da Conquista. The identification of the cases was made by consulting the SINAN databases, complemented by the Primary Care Information System (SIAB) and the Unified Health System User Registration System (CADSUS). For access to these data, a request was made to the Health Information Coordination sectors, through the municipal health information system, for consultation and comparison of the information from each reference case. A total of 580 new cases were identified in the period. Those located were those whose exit mode from the Notification Disease Information System (SINAN) was identified as "discharge for cure". Those who were mentally disabled and those undergoing treatment and/ or treatment abandonment were excluded.

After surveying the number of cases registered at SINAN and their respective addresses, home visits were made for field approach, aiming to locate, approach and invite people who were affected by leprosy for clinical evaluation and application of the study instrument. Concomitant with clinical evaluations and interviews, data were searched in medical records. Data collection was performed at the Basic Health Units/ Municipal Unit, support points and in case of impossibility of displacement of the units, the cases were attended at home.

The clinical evaluation was performed through the Simplified Neurological Assessment (ANS)[4,21,22] and conducted by reference researchers who were responsible for training the fieldwork team. The classification of physical disabilities followed the criterion adopted to define the assigned Physical Disability Degree (DD), standardized by the Ministry of Health, in force at the time of the study. Physical disability was classified by the highest grade observed in the evaluation of eyes, hands and feet: grade 0 (no leprosy-related disability), grade 1 (decrease or loss of sensation) and grade 2 (visible disabilities and deformities).[4] The eye-hand-foot score can vary from 0 to 12 points and was obtained by summing all GIs from the different body segments evaluated: two eyes, two hands and two feet.[6]

The presence of reaction episodes at diagnosis, discharge and after MDT completion, as well as DDs related to diagnosis and discharge from treatment, were identified based on medical records. The evolution of DD was described by comparing DD verified at the time of diagnosis and measured by the research team. For analysis, we considered the patterns of improvement (decrease in DD value), maintenance (unchanged DD in both moments) or worsening of DD (increase in DD value).

Sociodemographic and clinical variables were investigated by means of structured instruments containing as variables: gender, age, residence area, monthly income per capita, education, color, occupation, operational classification, clinical form, degree of physical disability, eye hand-foot (EHF) score, occurrence of reaction episodes, neural impairment (pain and/or thickening of the ulnar , median, radial, deep fibular and anterior tibial nerves) and time to discharge.

Data analysis was performed using the Stata 11.2 program (Stata Corporation, College Station, USA). For bivariate analysis, the following were considered: the development of disabilities and worsening of DD as dependent variables. Test was used chi -square Pearson and calculating the prevalence ratio (PR) with respective confidence intervals of 95% (95% CI).

This study is part of the IntegraHans - North/Northeast project "Health care for leprosy in high endemic areas in the states of Rondônia, Tocantins and Bahia: Integrated approach to operational, epidemiological (spatio-temporal), clinical and psychosocial aspects". It was approved by the Ethics

and Research Committee of the Federal University of Ceará (UFC), under CAAE 19258214.2.000.5054 and, prior to data collection, the participant's written consent was obtained by signing the Informed Consent Form (ICF).

RESULTS

222 (38.3%) of the 580 new cases identified in the period were included. Of the 358 who did not participate in the study, 122 (21.0%) had the wrong address, 94 (16.2%) had changed address, 45 (7.7%) were not found after three home visit attempts, 29 (5.0%) died, 11 (1.9%) refused to perform ANS, 4 (0.6%) refused to participate in the study, 14 (2.4%) were invited to participate in the study. However, they did not attend the service on the scheduled date, even after one more home visit and five attempts to locate them by telephone, referred by the case itself at the time of the first home visit. Those mentally disabled 2 (0.2%) who were undergoing treatment and/or treatment abandonment 37 (6.3%) were excluded.

There was a predominance of men and brown people (Table 1). The age range ranged from 20 to 95 years, with most cases above the average of 54 years (± 16.5) found. Most were married/ in stable union and Catholicism was the most common religion. Most cases were in the urban area and had their own home. Most had a monthly income of less than one minimum wage (MW), calculated according to the amount of MW attributed by year of collection (2014 and 2015). Almost 1/3 of the population was illiterate. The labor situation showed the largest share of economically active cases (Table 1). Among the inactive, with or without retirement and/or benefit, 18 (8.2%) reported having been removed from work due to leprosy.

According to the Brazilian Classification of Occupations (CBO), 109 (75.9%) people were included in the group of service workers, retailers in stores and markets. The remaining were 65 (29.2%) retired/ pensioner, 22 (9.9%) housewives, 22 (9.9%) not mentioned, 1 (0.5%) student and 3 (1.3 %) unemployed.

There was a higher proportion of multibacillary cases of the dimorphic clinical form. The average time elapsed after completion of MDT was 6 years (± 3.5). Considering only the 120 cases that presented leprosy reactions (Table 2), there were a maximum of 4 reaction episodes, observed in a single case. Predominated occurrence of type 1 reaction (RR): 54 (45.0%). The largest

Table 1. Sociodemographic characterization of leprosy MDT post-discharge individuals in the city of Vitória da Conquista - BA, 2001 to 2014

Variables	N	%
Sex		
Male	114	51.4
Feminine	108	48.6
Race / Color		
Parda	116	52.7
Black	56	25.4
White	36	16.4
Other	6	2.7
Yellow	3	1.4
Indigenous	1	0.5
Age range		
> 54 years	114	51.4
≤ 54 years	108	48.6
State married to		
Married / stable marriage	158	71.2
Not married	33	14.9
Separated / Divorced	18	8.1
Widower	11	4.9
Religion		
Catholic	135	60.8
Evangelical	63	28.4
There is no religion	22	9.9
spiritist	2	0.9
Area of residence		
Urban	148	66.7
Rural	68	30.6
Type of housing a		
Own home	198	89.2
Not own house	18	8.1
Monthly income b		
≤ R $ 1 SM	161	72.5
> R $ 1 SM	61	27.5
Schooling a		
Literate	149	67.1
Not literate	69	31.1
Current working context a		
Active	85	38.3
Inactive / Retired	58	26.1
Inactive	31	14
Inactive / Benefit	21	9.5
Active / Retired	12	5.4
Asset / Benefit	6	2.7
Never worked	4	1.8
Inactive / Retired / Benefit	3	1.3

[a] Data not available for all cases: Race / Color - 2; Marital Status - 2; Residence Area - 6; House type - 6; Schooling - 4; Current working context - 2.
[b] Minimum wage per year of data collection: 2014 (R $ 724.00 / n = 88) and 2015 (R $ 788.00 / n = 134)

number of cases during the occurrence of the first reaction episode was diagnosed with reactions before/at the time of diagnosis 42 (35%). In the recurrence of reaction episodes, there was a higher proportion of cases diagnosed at the time of discharge after cure, with 35 (81.4%) in the occurrence of the second episode, 11 (100%) in the third and 1 (100%) in the bedroom.

The percentage of DD assessment at diagnosis and at the conclusion of treatment was below 75%, which made it impossible to construct the indicator grade 2 disability ratio among the evaluated cases. The presence of some physical disability (DD 1 or DD 2) after completion of MDT was recorded in most situations, with visible disabilities (DD 2) being identified in 38 (17.1%) cases. The average OMP score found was 2, with amplitude ranDDng from 0 to 12 (Table 2). When the post-discharge DD attributed and the occurrence of reaction episode were associated, a higher proportion of people with DD 1 or DD 2 were observed among those cases whose first episode presented was type 1.

The evolution of DD from diagnosis to post-discharge evaluation showed that 106/222 (47.7%) were evaluated at these two moments. Of these, 21 (19.8%) progressed with DD improvement, 51 (48.1%) maintained DD and 34 (32.1%) showed worsening. As with DD, there were a high number of cases that were not recorded in the diagnostic and cure discharge 207 (93.2%).

Thickening/pain on neural palpation was the most frequently found finding on simplified post-discharge neurological assessment, affecting 2/3 of participants. Neural damage was verified in 148 (66.6%) of the analyzed cases, of these 80 (36.0%) presented ulnar nerve involvement , 33 (14.8%) median nerve, 54 (24.3%) radial nerve, 88 (39.6%) deep fibular nerve and 62 (27.9%) posterior tibial nerve. Bilaterally, ulnar nerve involvement was observed in 45 (20.2%) cases, 19 (8.5%) median nerve, 27 (12.1%) radial nerve, 47 (21.1%) deep fibular nerve and 38 (17.1%) of the posterior tibial nerve.

We identified 58 cases with physical disabilities (DD 1 / DD 2) in the eyes, 56 in the hands and 126 in the feet. Considering the total of 444 eyes, hands and feet evaluated, the feet presented the highest number of physical disabilities, 226 (50.9%), followed by 97 (21.8%) in the eyes and 84 (18.9%) in the hands. (Figure 1). Seventy-eight (35.1%) cases had DD 1 on both feet, 29 (13.1%) on both eyes and 17 (7.7%) on both hands. Eight (3.6%) had DD 1 for one foot and DD 2 for the other foot, 4 (1.8%) had DD 1 for one eye/ hand and DD 2 for the other eye/hand. There were 14 (6.3%) cases with DD 2 in both feet, 10 (4.5%) in both hands and 6 (2.7%) in eyes bilaterally.

At post-discharge physical disabilities were more frequent in males 77 (67.5%), in people over 54 years old 81 (71.1%), illiterate 52 (75.3%), residents of the rural zone 49 (72.1%), with more than six years of treatment completion 79 (68.1%), with income lower than / equal to R $ 1 SM 161 (72.5%), MB 98 (70%), who presented reaction episode 90 (75%) and with compromised nerves 104 (70.2%).

Bivariate analysis found a significant association with illiteracy, multibacillary clinical forms, reaction episodes, and compromised nerves (Table 3). There was no significant association of DD worsening with any of the variables studied.

Table 2. Epidemiological clinical characterization of leprosy MDT post-discharge individuals in Vitória da Conquista - BA, 2001 to 2014

Variables	N	%
Operational classification a		
Multibacillary	140	63.0
Paucibacillary	81	36.5
Clinical form a		
Dimorfa	87	39.2
Tuberculoid	66	29.7
Virchowiana	43	19.4
Undetermined	12	5.4
High time		
≤ 6 years	106	47.7
> 6 years	116	52.3
Reaction Episodes		
Yes	120	54.1
Not	102	45.9
DD at diagnosis		
Grade 0	62	27.9
Grade 1	23	10.4
Grade 2	21	9.5
Not rated	116	52.2
DD on high		
Grade 0	49	22.1
Grade 1	17	7.7
Grade 2	11	4.9
Not rated	145	65.3
Post-discharge DD		
Grade 0	78	35.1
Grade 1	106	47.8
Grade 2	38	17.1

[a] Data not available for all cases: Operational Rating - 1; Clinical Form - 14

DISCUSSION

This was the first systematic study conducted in the southwestern region of the state of Bahia to address epidemiological, operational and clinical aspects of leprosy, with an emphasis on the detection of physical disabilities after the completion of the MDT scheme. The estimated prevalence of physical disability was high. Previous studies have also considered this worrying factor in disease control in different scenarios, both nationally and internationally.[9,15,16,23,24,25] This study evidenced the need to adapt and improve the quality of care provided by local health services for the leprosy-affected population and their families, especially those who have already completed the MDT and are therefore not in active registration.

In the country, despite the policy focused on more comprehensive care in recent years, the follow-up of cases that have completed treatment for leprosy is still unsatisfactory.[26] This condition may be related to a possible negligence on the part of health services in Vitória da Conquista, in correctly guiding

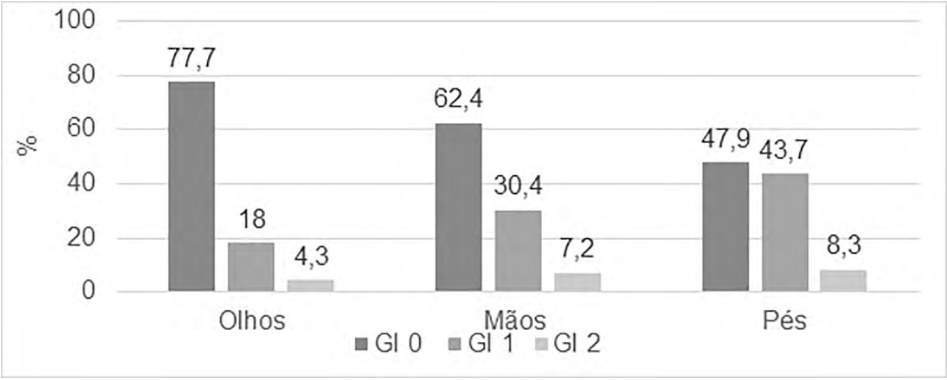

Figure 1. Degree of physical disability, according to eyes, hands and feet, in individuals after leprosy MDT discharge, in Vitória da Conquista - BA, 2001 to 2014

Table 3. Association between sociodemographic and clinical epidemiological variables with physical disabilities (DD 1 or DD 2) (Ordinance 3,125 / 2010) after discharge from MDT in the period 2001 - 2014, Vitória da Conquista - BA

Variables	Total	Disabilities		RP	95% CI	P value
		n	%			
Sex						
Feminine	108	67	62.0	1	–	0.390
Male	114	77	67.5	1.08	0.89 – 1.32	
Age						
≤ 54 years	108	63	58.3	1	–	0.047
> 54 years	114	81	71.1	1.21	0.99 – 1.48	
Schooling						
Literate	149	88	59.1	1	–	0.020
Not literate	69	52	75.3	1.27	1.05 – 1.54	
Zone						
Urban	148	90	60.8	1	–	0.109
Rural	68	49	72.1	1.18	0.97 – 1.44	
High time						
≤ 6 years	106	65	61.3	1	–	0.290
> 6 years	116	79	68.1	1.11	0.91 – 1.35	
Monthly income to						
≤ R $ 1 SM	161	108	67.1	1	–	0.261
> R $ 1 SM	61	36	59.0	0.87	0.69 – 1.11	
Operational Classification						
Paucibacillary	81	45	55.5	1	–	0.030
Multibacillary	140	98	70.0	1.26	1.008 – 1.574	
Reaction Episode						
Not	102	54	52.9	1	–	0.001
Yes	120	90	75.0	1.41	1.14 – 1.74	
Neural pain and / or thickening						
Not	74	40	54.1	1	–	0.017
Yes	148	104	70.2	1.3	1.02 – 1.64	

[a] Minimum wage (MW) per year of data collection: 2014 (R $ 724.00 / n = 86); 2015 (R $ 788.00 / n = 134). PR = prevalence ratio; CI = Confidence Interval

the returns, after treatment completion. The objective of these returns is the monitoring of chronic complications through early evaluations and interventions, since post-discharge is a period that easily manifests reactions, determining factors for disabilities and disabilities.[24]

Reciprocity in the performance of functions by users and health professionals is called shared responsibility, which is fundamental for the integral care of cases. In this regard, it also draws attention to the possibility of patients' lack of care through daily examination of body segments and following recommendations to avoid risk situations.[27]

In addition, the high number of medical records with inconsistent data and lack of information about DD assessment at diagnosis and discharge due to cure presuppose that non-compliance with control actions aimed at recording data in clinical histories, medical records and systems. possibly also reflect the fact that the service does not systematically monitor cases diagnosed with the disease and at discharge. This aspect, besides a local and punctual context, was also evidenced in evaluative studies conducted in other realities of the country.[23,24,28]

Among the possible social determinants analyzed, the largest contingent of men affected with disability, although not statistically significant, resembles national [8,9,29] and international.[25,30,31] studies. The predominance of men with physical disabilities may come from sociocultural aspects related to women's greater demand for medical care, as well as aspects related to self-care.[23,32,33]

Although there was no statistical significance in this study regarding the chronicity of the disease and the number of cases with disabilities were found over 50 years, the literature shows that there is a relationship between advancing age and the worsening of physical disabilities.[16,25,34,35,36] Chronic conditions caused by certain diseases, when associated with those resulting from the aging process, tend to manifest more expressively in individuals, which may generate a disabling process, affecting the functionality and quality of life of this population.[37]

The most mentioned occupations belong to the group of service workers, retailers in stores and markets, corroborating other findings in the literature.[8,28] Since most leprosy cases and people who have completed MDT are of working age, regardless of the different occupational classifications presented in the studies described in the literature, their functional abilities may be affected. This is due to the chronicity and complications of the disease, with consequent functional limitation, impact on activities, social participation[8,9,15] and even on individual and family economic sustainability, given the need for temporary or even permanent removal of the services they work for.[38.39]

The pattern of housing zone is similar to that found in the literature[9, 33, 40] assuming that the largest number of cases living in urban areas provides, in theory, better access to health services.[15] Low monthly income in MS and illiteracy are the most precarious socioeconomic conditions presented as a reality of the population studied with

physical disabilities, although with statistical significance only for the variable income schooling, is compatible with research conducted in the Northeast region of Brazil.[13, 14,15,33, 34,40] and others carried out in India and Indonesia.[25,30,31]

The low socioeconomic status creates conditions that favor the spread of communicable diseases, often disproportionately affecting individuals living in poor and marginalized communities, preventing these cases from having adequate access to care and prevention. In this context, the analysis of social determinants represents an important tool in identifying patterns of geographical aggregation and special overlap of communicable diseases.[41]

The fight against social inequalities in health, through the adoption of active intersectoral processes that involve political, economic and social aspects, is the first and most important step in addressing the physical disabilities caused by leprosy.[23,42] Guaranteeing resources for the financing of the Unified Health System, especially regarding policies aimed at controlling neglected diseases, considering their equitable potential, is fundamental for the improvement of the population's health conditions. It is assumed that a healthier population will further increase the levels of human development, contributing positively to the improvement of socioeconomic conditions and, consequently, to the health situation of Brazil, generating a virtuous cycle of growth.[41]

Among the clinical determinants analyzed, the high prevalence of clinically dimorphic multibacillary cases in the study population suggests late diagnosis of the disease, increasing the possibility of bacillary spread and the occurrence of physical disabilities (which was statistically significant, corroborating findings in national researches).[9,15,29,34,43,44] It is necessary to intensify the monitoring of the chronic manifestations that these cases may present, besides broadening the search for hidden foci of the disease through the surveillance of diagnosed cases and their contacts, aiming at early diagnosis,[5] since the scarcity of symptoms at the onset of the disease may contribute to delay and errors in diagnosis.[45]

Physical disabilities can be considered as a reflection of the clinical results, visible or not, of the neuropathies caused by the reaction episodes, which in this study showed a high prevalence. The same was observed for analysis of neural impairment, in which studies in the literature show an association of physical disabilities with pain/thickening of peripheral nerves.[30,46,47,48] In studies conducted in Aracaju (SE) and Araguaína (TO), the prevalence of physical disabilities was 2.14 (DD 1 or DD 2) and 2.5 (DD 2) times more frequent in cases that presented reaction and that followed in the period after the conclusion of the MDT, respectively.[15,34] The predominant type of reaction in this study, in all occurrences and recurrences, was RR, corroborating the findings in the literature.[33,49,50] Despite the lower number of occurrences than the other reaction types, the type 2 reaction (ENL) also deserves attention, considering that it is a reaction of greater severity and involves a greater number of compromises. To improve the control of chronic leprosy-related conditions, it is essential to establish a reactive episode surveillance system for a minimum of five to six months after completion of MDT treatment,[49] since the process of damage development on the nerves and their physical and psychosocial effects occurs slowly and sometimes silently. A greater number of cases with foot disabilities was identified, followed by eyes and finally hands, with a higher proportion of cases with loss or absence of bilateral sensitivity in the segments evaluated. The presence of greater foot involvement was also observed in different national and international scenarios.[13,31,51] However, although the number of cases with bilateral DD 2 in feet is lower than those with DD 1, this data is more relevant for the control program, since it configures maximum severity of disability due to the possibility of visible bilaterally deformities and consequent disability, demanding greater assistance from health services, focusing on disability prevention and rehabilitation.

The worsening of DD from diagnosis to post-discharge exceeded the number of cases with improvement, occurring in greater proportion from DD 0 to DD 1, however, there was no statistical significance with any of the sociodemographic and clinical epidemiological variables investigated. This scenario of DD evolution has also been observed in other studies.[15,31,32,38,50,52] being more frequent in multibacillary cases.[53] This condition is mainly related to late diagnosis, disease severity and presence of neuritis.[52] In this sense, it draws attention to the adoption of a planning that places neurological assessment as a priority to be performed by health teams, given the association with the chronicity of the disease or the degree of disability established.[46]

Measures should be taken to achieve control of cases with physical disabilities resulting from leprosy, as well as to prevent the development and installation of new disabilities. Systematic follow-up of cases, whether disabilities or not, improvement of strategies that ensure the implementation of a referral and counter-referral system involving all levels of attention, monitoring of neural functions, a careful record of findings during physical assessment by patients. The use of DD and EHF score, return scheduling and better qualification of professionals involved in disease control, considering all the biopsychosocial aspects of individuals and ensuring comprehensive care, should be prioritized after completing treatment with MDT.[8,15,16,17,43]

The main limitation and a potential bias for participation in this study was the number of cases that had an incorrect address, moved to other locations or were not evaluated due to non-attendance. It is possible that the sociodemographic and clinical characteristics in this population are different from the cases included in the study. In addition, the completion of notification forms and medical records presented several gaps, such as the absence of data and some information that compromised the validity and quality of the record of the degrees of physical disability at the time of diagnosis of the disease and reaction episodes and mainly post-discharge. However, many of these pieces of information could be identified by searching different data sources.

CONCLUSION

In the city of Vitória da Conquista, physical disabilities constitute an important problem in the individual and collective context in cases that have completed standardized specific treatment for leprosy. The significant association with illiteracy confirms that disabilities are associated with contexts of social vulnerability. Clinical factors such as multibacillary classification and occurrence of reaction episodes and neural impairment were confirmed as factors associated with the maintenance of physical disability in people after leprosy discharge. These findings indicate the need for more intensive monitoring by the control programs of chronic leprosy conditions, especially after the completion of MDT. Finally, this study kept its focus on physical disabilities related to the disease, and further studies are needed addressing the characteristics of activity limitation or restriction to social participation at the post-discharge moment, characteristics also linked to the concept of disability.

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