Analysis of the Scientific Production on Hansen's Reactions and Nursing Assistance

LESSA, Jeanne Duarte [1]


SUMMARY

Leprosy is an infectious disease caused by Mycobacterium Leprae, which represents an important public health problem, and nursing is at the point of attempting such a disease, which brings with it the presence of a leprosy reaction with a broad aspect of manifestations during the course of the disease. The objective of this study was to analyze the scientific production of the possible leprosy reactions present in leprosy. The present study is an integrative review with predetermined steps, where the following databases were used: SCIELO Scientific Eletronic Librany Online and LILACS Latin American and Caribbean Literature in Health Sciences, and seven studies were selected with period from 2007 to 2011 for the construction of the research. The results evidenced 421 publications, 117 of which were found in SCIELO and 304 in LILACS, where 414 were not related to the guiding question. The analyzes of the publications show that the reactions are defined as changes resulting from the immunoinflammatory process that can be expressed in different periods of the disease. It is considered that the illness of leprosy covers complex aspects, being the professional nurse to be attentive when dealing with leprosy patients.
Keywords: Hansen's Disease, Hansen's Reactions.

INTRODUCTION

Leprosy is an infectious disease caused by Mycobacterium Leprae. It is a slow-onset disease that manifests itself mainly through dermatoneurological signs and symptoms. It is also an important public health problem, not only because of the number of people affected, but also because of the incapacities that can be developed. It is known that nursing should be attentive to individuals who may present this disease which brings with it intercurrences, that is, the presence of leprosy reactions during the course of the disease.\(^1\)\(^2\).

Leprosy reactions present a broad aspect of clinical manifestations in the course of the disease that reflects a phenomenon of hypersensitivity to Mycobacterium Leprae, thus constituting an intercurrence with signs and symptoms that lead to more suffering to the affected individual, the same can occur in paucibacillary patients (indeterminate and tuberculoid) and multibacillary (dimorphic and virchowian), and these reactional conditions may be classified as type I or reverse reaction, type II or erythema nodosum, and isolated neuritis.\(^3\)

Such manifestations occur mainly in multibacillary leprosy, especially during the reactional phases, being a consequence of the infiltration and direct proliferation of the bacillus in the affected organ of the individual.\(^4\)

Nursing actions are of great importance, since the prevention and control of the disease is linked to timely detection, where the nurse as an active professional is an essential part in the control and control of leprosy.\(^5\)\(^6\).

The moment of meeting between professional and client aims to identify and provide assistance according to the patient's need. It is through listening that we can have knowledge of the conditions that are present in the life of the individual, and at the same time determines the profile of health and illness, and it is up to the nurse to form a bond of trust and commitment to the client, with the purpose of seeking the improvement of the quality of life through a participatory approach of both parties.

The delay in the differential diagnosis between leprosy recurrence and reaction causes delay in the conduct, which will counteract the patient's care, that is, thus causing a delay in the intervention according to the client's need, which is an existing difficulty.\(^3\)

Caring for leprosy patients requires a broad knowledge of pathology, anatomy, physiology and how to deal with aspects that involve the disease, since individuals may be surprised by reactional pictures.\(^3\)\(^7\).
It is of great value to highlight the follow-up of clients with leprosy reactions, and the professional should stimulate the participation of the user in the program, besides clarifying about various aspects of the pathology, so that they understand the clinical manifestations that they experience, so that they can feel insurance in the self-care of their health 8.

Leprosy patients may be surprised by reactional episodes, where this phenomenon may occur before, during or after the treatment of leprosy, so nursing assistance becomes necessary, where through early diagnosis, dermatoneurological examinations, prevention of disabilities, psychological support and treatment are actions that the professional uses in favor of the control and reduction of the disease 3,6.

Considering the importance of nursing care to clients with leprosy, this study aimed to analyze the scientific production of the possible leprosy reactions present in leprosy, reporting that leprosy monitoring depends on a set of fundamental actions for leprosy, prevention and control of the disease.

The choice of this theme was due to the fact that the leprosy reactions become present in this infectious-contagious disease, thus deserving to be carried out an analysis of the studies found to know what the same evidence on the subject. Considering of great value to continue with this study that is of interest to the public health, since it aims at the early diagnosis not allowing that the confirmed cases of the illness get to develop physical incapacities.

2. METHODOLOGY

This is an integrative review study with predetermined steps, which includes research analysis as a focus on the subject studied, with the objective of analyzing what is scientific production about the possible leprosy reactions present in leprosy, and thus provided a comprehensive understanding of nursing care in leprosy. To start the review was defined the theme and the purpose of the research. The keywords used in the research were: Leprosy and Hansen's Reactions. Literature searches were carried out through the internet, where the consultation was carried out through the following databases: Scientific Electronic Libra Online (SCIELO) and Latin American and Caribbean Literature in Health Sciences (LILACS), making the internet an important work tool. The following inclusion criteria were used: articles in Portuguese with full text in the mentioned databases (SCIELO and LILACS) with period of publication from 2007 to 2011, which adopted an approach according to the purpose of the study. The following were excluded from the research: non-accessible articles with full text, articles in English and Spanish, and those that did not address the proposed theme, and those that were not published period. The research was carried out according to the theme, and the articles were analyzed by determining a pre-selection of them, where the themes and abstracts were read, where they were used for the construction of the present research.
3. RESULTS AND DISCUSSION

The search resulted in 421 publications, where 117 were found in SCIELO and 304 in LILACS. From these publications, seven complete articles were selected that fit according to the research, four articles were selected in the SCIELO database and three in the LILACS database.

Through the first analysis, it was verified that 414 publications were not related specifically to the guiding question or did not meet the proposed inclusion criteria, resulting in seven publications that were definitively used for the construction of the present study.

It was observed that among the articles selected, they dealt with different types of reviews, among them cross-sectional study, case-control study, retrospective study, case report and descriptive research.

The analysis of the articles included in the review was started with a view to identifying the topic addressed in the study, where after successive readings of texts it was possible to detect the different approaches.

It was decided to deepen the analysis of the publications that involved leprosy reactions as the study's main focus.

In relation to the quantitative of the analyzed publications the table below presents the period of publication and the number of articles used.

Table 1: Quantitative selected according to the publication period.

<table>
<thead>
<tr>
<th>Period</th>
<th>Number of works</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>1</td>
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<tr>
<td>2008</td>
<td>2</td>
</tr>
<tr>
<td>2009</td>
<td>2</td>
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<tr>
<td>2010</td>
<td>1</td>
</tr>
<tr>
<td>2011</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
</tr>
</tbody>
</table>

Most publications show that leprosy reactions are defined as changes resulting from the immunoinflammatory process mediated by antigens of Mycobacterium Leprae that establish relationship with the bacillary load and immune response of the host, with the outbreak of acute, cutaneous and neurological inflammatory manifestations. These may occur before, during or after the
polychemotherapeutic treatment (TKT)\textsuperscript{3,9,10,11,12,13}.

It was also observed that in a single article, these manifestations are similar to rheumatic diseases, where the various clinical complaints may resemble other diseases, thus making the diagnosis a challenge in the first months and years of illness\textsuperscript{4}.

Reactional episodes in leprosy remain one of the major challenges for the leprosy control program in endemic countries, as in the case of Brazil. According to two publications report that approximately 25% to 30% of the people affected by the disease have reactions or neural damage at some time\textsuperscript{10,11}.

Reactional states when it occurs before diagnosis and treatment are benefited, since this fact encourages the search for the solution of the problem, those that manifest the reactions during the treatment are assisted and the diagnosis of the reaction and treatment are more accessible, that occurs after discharge may be limited by a number of factors with barriers to access, deficiency in client research with these possible reactions, poor health education, because educational practices about reactional states should be inserted into the context for the control of endemia and the clients' misunderstanding of the information passed by the professional\textsuperscript{10}.

The World Health Organization (WHO) established clinical and laboratory criteria consisting of smear microscopy and histopathology, and this technique is indicated only to patients and suspects according to the norms of the Ministry of Health (MS), and these laboratory immuno-markers are important to differentiate the reaction leprosy of clinical leprosy and/or relapse\textsuperscript{1,2}.

According to analysis carried out in the articles, the publications document that the reactional states can arise both during the treatment and also in the first year after discharge, since the late reactions that are classified as relapse can occur after three or five years of discharge, ondes individuals who suffer from reactional episodes after discharge show that they are more likely to be portrayed due to suspicion of relapse\textsuperscript{3,9,13}.

Bacilli can remain relatively protected from immunocellular action and therapy, where under favorable conditions they proliferate again, thus being a reflection of the individual's immune behavior, which reinforces that the treatment of leprosy itself can be a precipitating factor for the appearance, stimulating inflammatory reactivity\textsuperscript{3,13}.

Through the analyzed studies it is possible to identify a variation of the individuals affected by the reactional states, which shows that the male sex is more propitious to be affected, presenting the following age groups: from 20 to 40, 30 to 44 and 30 to 59 years, where the greater proportion of men with reactions may be a characteristic of the disease, thus demonstrating the need for a more careful
follow-up of these patients because they are more prone to impingement\textsuperscript{3,12}.

Leprosy reactions are divided into three types: reverse reaction, erythema nodosum and isolated neuritis.

The reactional states may correspond to exacerbation of cellular immunity or demonstrate effects of marked formation of immunocomplexes called leprosy reactions type 1 and type 2\textsuperscript{10}.

According to Br\textsuperscript{and}ão\textsuperscript{10}, around 25\% of all patients with leprosy may have a type 1 reaction, being more frequent in multibacillary patients (dimorph and virchowiana). In the case of type 2 reaction, the frequency varies and may reach 50\% in multibacillary patients.

Some publications indicate that in type 1 reactions or reverse reaction (indicates increased cellular immunity) the reactivation of the lesions becomes evident, becoming erythematous, bright, and may evolve with desquamation of the entire lesion associated with residual hyperchromia or lead to ulceration of the same\textsuperscript{9,10}.

Type 2 reactions or erythema nodosum (exacerbation of humoral immunity) is an event mediated by immunocomplexes, and there may be transient increase of cellular immunity, it is characterized by sudden onset of inflammatory, dermal or subcutaneous nodules, erythematous, local heat, mobile palpation and often painful, and nerve involvement, ocular lesions, inflammatory edema of the hands and feet and erythema nodosum, such as ulceration or involvement of internal organs and a necrotizing reaction of the skin\textsuperscript{9,10}.

There is also the existence of a third classification of the reactional states, being the isolated neuritis that is denominated as the appearance of spontaneous pain or the compression of peripheral nervous trunks accompanied or not of localized edema and of impairment of the neurological function, nevertheless has the the possibility of neuritis developing without the presence of pain, which is characterized as silent neuritis, but there may be changes in sensitivity and / or motor power\textsuperscript{3,10,13}.

The programming of medications is included in the assistance given to the reactional states.

It is of extreme importance for the professional to differentiate the reaction state from a case of relapse, where the reactions should be given by the client to receive antireactivity treatment, according to the World Health Organization (WHO), the use of corticosteroids in the treatment of reverse reaction and thalidomide for the treatment of erythema nodosum, in cases of relapse, to restart the polychemotherapy (TKT) regimen, knowing that the treatment regimen for paucibacillarians (people with few bacilli and who does not transmit the disease) is six months and multibacillary (people with many bacilli and considered the main source of infection) is 12 months\textsuperscript{3,11}. 

One of the publications indicates that the organization of care for reactional states is linked to leprosy control actions, i.e., the acquisition and distribution of antireactional medication such as prednisone and thalidomide are the responsibility of the Ministry of Health (MS) and the Secretariats. However, the dimensioning of patients in use of such medications and responsibility for the use of such drugs is the responsibility of the health services[^10].

Prednisone used at a high dose or for a prolonged time may lead to increased blood pressure, increased glycemic rate and glaucoma. And thalidomide, which is another medication for reaction, can cause dependence and drowsiness and should be controlled and guarded by the same teratogenic agent[^11].

Among the publications analyzed, one emphasizes that early and adequate treatment of reactional episodes reduces neural damage by up to 60%, making the experience of health professionals important in identifying, diagnosing and treating these episodes that will have an impact on the prevention of physical disabilities[^11].

[^1]: [1]