REFACS
Revista Família, Ciclos de Vida e Saúde no Contexto Social

THE REACTIONAL PHENOMENON IN LEPROSY AND ASPECTS OF NURSING CARE

O FENÔMENO REACIONAL NA HANSENÍASE E ASPECTOS DA ASSISTÊNCIA DE ENFERMAGEM

EL FENÓMENO REACCIONAL EN LEPRA Y ASPECTOS DE LA ASISTENCIA DE ENFERMERÍA

Received: 05/03/2014
Approved: 30/09/2014

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Due to chronic evolution in leprosy, acute phenomena known as reactional episodes may occur before the diagnosis, during treatment, or even after the cure, predisposing patients to deformities. Besides drug therapy, the assistance provided to leprosy patients includes special care. There is nowadays growing concern of nurses about the systematization and documentation of their professional practice in different areas, so that the assistance given is planned according to the particular problems and needs of each client. The aim of this work was to describe some facts about in role of nurses in leprosy patient care and their important and necessary involvement in measures to control the disease. The nurse is especially involved in patient evaluation to prevent disabilities, in the prevention of opportunistic infections, sending samples for laboratory tests, in the formation of support groups for patient guidance, and in the planning of essential measures for leprosy control programs.
Descriptors: Leprosy; Erythema nodosum; Hypersensitivity; Nursing.

Devido à evolução crônica da hanseníase, fenômenos agudos, chamados de episódios reacionais, podem aparecer antes do diagnóstico, no tratamento ou após a cura e predispor a deformidades. Além da terapêutica medicamentosa, a atenção ao portador de hanseníase exige cuidados especiais. Atualmente existe uma preocupação crescente dos enfermeiros em sistematizar e documentar sua prática profissional, nas diferentes áreas de atuação, planejando a assistência de acordo com as necessidades especiais de cada usuário. Tem-se aqui como objetivo descrever alguns fatos no Brasil acerca do papel do enfermeiro no cuidado aos pacientes com hanseníase e seu relevante e necessário envolvimento com as ações de controle da doença. O enfermeiro atua especialmente na avaliação de prevenção de incapacidades, na prevenção de infecções oportunistas, no envio de materiais para exames laboratoriais, na formação de grupos de orientações e assistência aos pacientes e no planejamento das ações de exigência do programa de controle da hanseníase.
Descritores: Hanseníase; Eritema nodoso; Hipersensibilidade; Enfermagem.

En la evolución crónica de la lepra, fenómenos agudos, llamados episodios de reacción, pueden aparecer antes del diagnóstico, en el tratamiento o después de curada y predisponer a deformaciones. Además de terapéutica medicamentosa, la atención al portador de lepra exige cuidados especiales. Actualmente existe preocupación creciente de enfermeros por sistematizar y documentar su práctica profesional, en diferentes áreas de actuación, planificando asistencia de acuerdo con las necesidades especiales de cada usuario. El objetivo acá fue describir algunos hechos acerca del papel del enfermero en el cuidado de pacientes con lepra y su relevante y necesaria implicación en acciones de control de la enfermedad. El enfermero actúa especialmente, para evaluar la prevención de incapacidades, prevenir infecciones oportunistas, enviar materiales para exámenes al laboratorio, formar grupos de orientaciones, dar asistencia a pacientes y planificar acciones exigidas por el programa de control de la lepra.
Descriptores: Lepra; Eritema nudoso; Hipersensibilidad; Enfermería.

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INTRODUCTION

Due to the chronic progression of leprosy, acute phenomena, called reactive episodes, may appear in the course of the disease or after healing[1]. Leprosy reactions are not drug reactions or side effects of polichemotherapy. They are immunological phenomena related to *Mycobacterium leprae (M. leprae*) antigens, released during chemotherapy and occur according to the host's ability to identify it.

Patients may have neural or general impairment to varying degrees, from the appearance of lesions with few symptoms to states in which papular erythematous lesions, extremely sensitive to touch, associated with fever, joint pain, insomnia, depression and general malaise are highlighted[2,3].

The first reference to the reaction phenomena was made by Klingmuller in 1930[4] and, Hayashi, in 1933[5]; they called these phenomena as *Eritema nodosum leprosum (ENH).*

Among the first studious of the reaction phenomenon, according to the Treaty of Leprology[6], is Schujmam, who examined from 1938 to 1945 seven patients with different clinical characteristics in the reaction, and other researchers who called leprosy reactions as leprous fever, suggested by Goodheve, and acute outbreaks, and then by Correia and Chevarria.

Wade started the treatment of reactional Tuberculoid form in 1934, having related the worsening of the crisis with the use of potassium iodide and Schujman & Fernandez in 1935 and Souza Lima & Souza Campos (1947)[7] contributed greatly to the study and dissemination of the characteristics of reactional states in leprosy patients.

Pathogenesis and immunological implications of leprosy reactions still need clarifications[2]. With the increase in immune response to *M. leprae* antigens, a rapid change in the patient's immune system occurs, leading to an inflammatory reaction and vice versa. But despite the acute and serious response, the body remains unable to numerically lower bacilli[8].

Reaction crises in the person with leprosy can be triggered by various situations that lead to imbalance of the immune system, such as physical and psychological stress, pregnancy, surgery, trauma, infections, hormonal factors and antibiotic therapies.

They usually appear in the first six months of therapy, due to the rapid destruction of the bacilli by medication, but they can occur up to more than 18 months after the beginning of treatment[8-11].

Considering this serious problem to be faced in leprosy, this essay aims to describe some facts about the role of nurses in the care of leprosy patients and their relevant and necessary involvement in disease control actions.

METHOD

From the need to discuss the above theme, a description of some facts was held, based on practical experience of dealing with people who have or have had leprosy. The importance of reflecting on the subject is given by the fact that it is from the reaction phenomenon that people with leprosy may have unpleasant symptoms such as fever, malaise, apathy and in many cases it can trigger to (sometimes irreversible) sequels.

From this perspective, some considerations about the disease, the types of reaction, the Ministry of Health recommendations on actions to be taken during the reactions and side effects of medications are raised; and then, it is performed a reflection on the history of nursing practice in patient care that merges with the history of leprosy itself, complementing with its practical and operational performance and the importance of leveraging studies and sensitizing professionals in this area.

RESULTS AND DISCUSSION

Short presentation of the reaction phenomena in leprosy

Using immunological and bacteriological criteria, Ridley & Jopling (1966)[12] have classified the reaction states in two types: Type I Reaction and Type II Reaction. Type I reaction is also known as Tuberculoid reaction or Reversal Reaction (RR), which occurs in tuberculoid leprosy and in negative borderline, being mediated by cellular immunity. Type II reaction, called Leprosy Reaction or Erythema Nodosum Leprosum (ENL), occurs in lepromatous leprosy and positive borderline and is mediated by antibodies, by humoral immunity[9,11,13].

Type I reaction is characterized by erythema and edema of pre-existing tuberculous lesions, appearance of new lesions, papules and erythematous plaques in small number. The surface of the plaques is smooth and shiny, occurring lamellar desquamation during involution. Erythroderma reaction may occur in hands and feet, especially in the palmar and plantar regions, reactive lesions on the face, around the eyes, nostrils and mouth.

Usually the general condition of the patient does not let him weakened[12]. Type I reaction has acute or sub-acute progression, occurring disturbance of the surface sensitivity[14].

The reaction in borderline form of the disease is clinically similar to the reaction in tuberculoid form, but there may be overall health impairment and severe neural damage. The most injured nerves are: trigeminal, facial, ear, ulnar, median, radial, posterior tibial and common peroneal nerves. The "*Borderline leprosy reaction*" can arise with spontaneous pain or pain on palpation and when thickening occurs without pain, it is called silent neuritis. Neurites can cause reversible or irreversible damage due to decreased blood flow caused by nerve thickening. Neurites are serious conditions in borderlines and tuberculoid borderline, requiring special and emergency care[13].

In borderline leprosy, the reaction conditions may be Erythema Polymorph type, or Erythema Nodosum Leprosum type, or both associated[14]. In this light, the episodes are often chronic and recurrent [8], which calls for the observation of the coexistence of triggering factors such as intestinal parasites, concomitant infections, tooth decay, emotional stress, as well as the use of clofazimine associated with corticosteroid[10,11].

The Type II reactions (ENL) are characterized, in skin level, by acute onset of papules lesions, plaques or nodular, erythematous, often preceded by fever, general malaise and painful lymph node infarction[12,13].

Lesions and surrounding areas can become extremely painful and sensitive to touch. In some cases the plates may ulcerate. When the lesions are located in the path of the nerves, thickening in nerve trunks and spontaneous pain or pain on palpation occur. Such phenomena are recurrent and are often worsen dramatically, even before the cure of the first crisis[1].

The postpartum period is a critical period for the occurrence of the reaction outbreak due to low resistance after delivery, when ENL can install[9].

Nerve damage, common in reactive states, are major problems in the treatment of patients[10,13,14] and may become chronic and often require surgical intervention or use of antidepressants/convulsants[10].

Treatment of reactions in leprosy

In the treatment of Type I Reactions, corticosteroids are used for anti-inflammatory and immunosuppressive action. Clofazimine is also elected in this treatment for its anti-inflammatory and bactericidal action. This drug therapy, used two to six months, is of great importance in the prevention of disabilities, supervised by nurses.

The side effects of using these drugs allow the occurrence of diabetes, hypertension, osteoporosis, peptic ulcer, hyperkalemia, cataracts, among others. This explains the attention with treatment often

prolonged[1]. Along with drug treatment, it is recommended immobilization of affected nerves or hands and feet in reactive state, with subsequent rehabilitation of the affected member[15].

In treating Type II Reaction or ENL, the drug chosen is thalidomide for its immunosuppressive effect[16]. It is a teratogenic drug, therefore its use is banned in women of childbearing age. In such cases, the use of steroids is held. Where the reaction becomes chronic and intermittent, it is recommended to use clofazimine[11].

There is need for special care in neurites and in the use of corticosteroids in the schemes proposed by the Ministry of Health during the treatment of reactions, investigating mainly tuberculosis, diabetes, hypertension, gastric problems, glaucoma, cushing, among others. Warning for these problems, researchers have suggested alternative treatments rather than corticosteroids, especially in women of childbearing age, replacing the drug by clofazimine, or pentoxifylline, or cyclosporine[11,18-20].

The insertion of the Nurse in Care of Leprosy

In addition to drug therapy, attention for leprosy patient requires special care of interpersonal interaction, intrinsic activity to nursing care.

The history of the nursing role in the care of leprosy patient is very similar to that found in the history of leprosy worldwide.

Regarding the reality of nursing work and nursing actions implemented in the care to patients with leprosy, Cristofolini & Ogusk[21], complained, in 1988, about the neglect of national health authorities in relation to the number of endemic cases, easeness of abandonment to treatment with sulfones and stigma that the disease produced. These authors participated, along with a group of researchers in the development of the first steps for conducting a Nursing Assistance Program for Leprosy in Brazil.

Concerned with social integration of the patient, that at that time had began to be served in public service rather than in specialized hospitals, trained and unbiased staff have engaged to take care of them. Therefore, it has started training of nurses for evidence of diagnoses, nursing consultation (consisting of two major items: the interview and physical examination), disability prevention and care for drug therapy.

The Pan American Health Organization (PAHO) in 1989 brought together nurses from various countries of America to discuss the participation of these professionals in leprosy control, referencing seven basic areas.

These areas appear as targets for the reorganization of services and strategies for the control of leprosy and they are: the search and diagnosis of cases; monitoring during and after drug treatment; disability prevention; management of control activities; registration system and epidemiological surveillance and research in the area, thus characterizing the nursing actions[19,22].

In 1990, the Ministry of Health of Brazil published "Technical Standards and Procedures for the use of Polichemotherapy Schemes and Treatment of Leprosy," by which nurses receive special assignments, such as: providing nursing care to individuals, families and communities; developing technical and administrative actions; applying the principles of operational research[17].

In 1991, it was held the first Workshop about Nursing Actions in Leprosy, by the Coordinator of the Control Program of Ministry of Health of São Paulo, whose objective was the evaluation and the implementation of appropriate intervention strategies to comprehensive care to patients.

Following the Target Plan in Leprosy Control, it is promoted thereafter, throughout the State of São Paulo, the Nursing Actions Training, in order to systematize the guidelines in caring for these users.

Another relevant factor to reflect and create efficiency mechanisms in the care of leprosy patients was the implementation of

the teaching-service integration. This project provides for the interplay of universities that train health professionals, with institutions that provide services to the public in the State of São Paulo, creating, in this approach, a close relationship between various actors, such as those directly connected to the patient, those who manage the control activities, those who care for the epidemiological surveillance, those who research and those who teach[23].

Currently, there is a growing concern of nurses to systematize and document their professional practice in different areas, planning assistance according to the problems and special needs of each user or region[24-31].

In 2001, the State Secretaria of São Paulo for Health published the SS Resolution - 130 of 10.08.2001, approving the Technical Standard that establishes the Guidelines and Strategies of Actions for Leprosy Control and recommendeds treatment regimens, aiming at the reorganization of services in post-elimination phase of the disease in the country[32].

It has been noted that the earlier observation of symptoms and the orientation of the findings, the easier to determine and repair damage. Failure to early referral to specialists, for example, dermatologist, occupational therapist, ophthalmologist, social worker, nutritionist, physiotherapist, psychologist, can lead to irreparable damage when necessary to prevent or rehabilitation of any affected area[33].

Since then, the intervention model for disease control is based on early diagnosis, timely treatment of all cases diagnosed until discharge for healing, preventing disability and surveillance of household contacts, thus ensuring specialized care in clinics and reference units, whether they are middle and/or high complexity[10,11,19,20].

CONCLUSION

Even as an ancient disease, leprosy affects worrisome endemic parameters in Brazil, ranking the second position in prevalence in the world. Thus, it is of utmost importance the role of nurses in the care of leprosy patients in crisis reaction, especially in early detection of silent neuritis with continued palpation of peripheral nerves, in simplified neurological assessment, intending prevention of disability, in observation of color change and appearance of spots and in detection of edema in the extremities.

The nurse acts beyond the nursing consultation in the examinations, assessments, and referrals for early search of findings in dermatological and neurological examination to quickly correct the causes, in prevention of opportunistic infections at the time of treatment due to the inhibition of resistance, in shipping materials for laboratory tests, in training groups on health education and in assistance to patients with or without problems related to reactive states for the solution, forwarding or in guidelines and problems that reactions can generate in patients.

The actions involving organization, management and administration of the leprosy control program are also part of the nurse's duties in their daily routine care.

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CONTRIBUIÇÕES
Both authors had equal shares in preparation and drafting final of the article.