Leprosy Mononeuritis Multiplex: ulnar, peroneal and tibial decompression surgery

Mononeuropatia múltipla lepromatosa: cirurgia de descompressão ulnar, peroneal e tibial

Lívio Pereira de Macêdo¹
Joao Batista Monte Freire Filho¹
Armando Ugulino Netto¹
Kauê Franke¹
Pierre Vansant Oliveira Eugenio²
Fernando Henrique Morais de Souza²
Nivaldo S. Almeida¹
Hildo Rocha Cirne Azevedo-Filho³

ABSTRACT

Leprosy is a chronic infectious peripheral neuropathy caused by Mycobacterium leprae. In this case, we report a case of a patient that was submitted to left ulnar nerve decompression at elbow, left common peroneal release at the fibular head and left posterior tibial nerve release in order to relief neurophatic pain and avoid deformities.

Keywords: Leprosy; Mycobacterium leprae; Nerve decompression; pain

RESUMO

A hanseníase é uma neuropatia periférica infecciosa e crônica, causada por Mycobacterium leprae. Relatamos um caso de paciente submetido à descompressão do nervo ulnar esquerdo, no cotovelo, com liberação peroneal esquerda comum na cabeça da fíbula e do nervo tibial posterior esquerdo, a fim de aliviar dor neuropática e evitar deformidades.

Palavras-chave: Lepra; Mycobacterium leprae; Descompressão de nervo; Dor

¹ MD, Department of Neurosurgery, Hospital da Restauração, Recife, Pernambuco, Brazil
² MD, Chief of Peripheral Nerves Section, Department of Neurosurgery, Hospital da Restauração, Recife, Pernambuco, Brazil
³ MD, PhD, Chairman of Neurosurgery Department, Hospital da Restauração, Recife, Pernambuco, Brazil

Received Mar 13, 2021
Accepted Jul 19, 2021

BRIEF NOTE

Leprosy, a chronic infectious disease caused by Mycobacterium leprae, identified by G. H. A. Hansen in 1873, is one of the most common treatable peripheral neuropathy in the world. It causes a mononeuritis multiplex of immunological origin that results in autonomic, sensory and motor neuropathy. Mononeuritis is the most common presentation of leprosy, comprising 79% of a series of 19 leprosy patients, and the nerves in the upper limbs are more often affected than those of the lower. The most commonly involved nerves are the ulnar, median, posterior auricular, superficial radial, common fibular, superficial fibular and posterior tibial. Nerve thickening in neuritic leprosy ranges from 40 to 75%. In a multicenter study including 303 multibacillary patients in North India, the nerve enlargement was seen in 94%. The early diagnosis and treatment of leprosy often leads to a less amount of disabilities.
A 28-year-old man, with leprosy, presented left upper limb neuropathic pain at the elbow and hypothenar region associated with ulnar nerve territory weakness and atrophy. On neurological examination, Duchenne’s sign was presented on the left hand (Figure 1). Also, the increase of thickness in ulnar, peroneal and tibial nerve was evident. Subsequent electromyographic evaluation was consistent with leprosy mononeuritis multiplex with left ulnar and peroneal and tibial bilateral neuropathy. The patient was submitted to left ulnar nerve decompression at elbow, left common peroneal release at the fibular head and left posterior tibial nerve release (Figure 1). The right lower limb nerves release was postponed due to foot sole ulcer.

The patient followed with reduction of neuropathic pain, improving his quality of life. Leprosy neuropathy continues to be a health problem in poor developing countries of tropical and subtropical areas, but some cases have been recently reported in developed countries. The employment of prophylactic measures should play a main role in the eradication of this infectious neuropathy. Early diagnosis and treatment is mandatory to avoid disabilities and deformities.

**Figure 1.**

A. Left ulnar nerve neurolysis at elbow, preserving MABC and FCU branches.  
B. Left common peroneal release at the fibular head, showing the articular and tibialis anterior motor branches, and the superficial and deep fibular nerves.  
C. Left posterior tibial nerve release, showing the calcaneal nerve (Baxter’s nerve).  
D. Duchenne’s sign on the left hand.
REFERENCES


CORRESPONDING AUTHOR

Livio Pereira de Macêdo, MD
Department of Neurosurgery
Hospital da Restauração
Recife, Pernambuco, Brazil
E-mail: livio21@gmail.com

Conflicts of interest: nothing to disclose.