CASE REPORT

ULNAR NERVE DECOMPRESSION IN NEURAL FORM OF LEPROSY IN CHILDHOOD

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ABSTRACT

Leprosy is a disease that potentially affects adults with a long latency period of 3 to 5 years. However, children are prone to acquire the disease especially in places of high prevalence and poor epidemiologic control. The surgical decompression is an ancillary method of treatment, although recent investigations call attention for the similarity of results of conservative management. The objective of this study, then, was to call attention for surgical indication in leprosy patients with ulnar impairment soon after failure of conservative management. The authors describe and analyze a case of an outpatient operated child with ulnar nerve involvement by leprosy after 1 year of clinical treatment and failure. The predominant symptoms were pain and physical deformity. There was a great improvement following the surgery even after delayed operation. The surgical intervention is sometimes necessary to avoid deformities although more randomized series must confirm the superiority of surgery in relation to clinical management in some cases.

Keywords: ulnar neurolysis, leprosy, quality of life

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RESUMO

A hanseníase é uma doença que afeta adultos e possui um longo período de latência que pode durar de 3 a 5 anos. Entretanto, crianças estão sujeitas a adquirir a doença especialmente em locais com alta prevalência e pouco controle epidemiológico. A descompressão cirúrgica é um método auxiliar de tratamento, embora pesquisas recentes chamem a atenção para a similaridade de resultados de condutas mais conservadoras. O objetivo deste estudo é chamar a atenção para a indicação cirúrgica em pacientes com hanseníase que apresentem dano no nervo ulnar após ineficiência do tratamento conservador. Os autores descrevem e analisam o caso de uma criança com hanseníase, em atendimento ambulatorial, com envolvimento do nervo ulnar após fracasso de um ano de tratamento clínico. Os sintomas predominantes foram dor e deformidade física. Houve profunda melhoria após a cirurgia apesar desta ter sido executado com atraso. A intervenção cirúrgica é às vezes necessária para evitar deformidades embora estudos randomizados sejam necessários para confirmação da superioridade da cirurgia em relação ao manejo clínico de casos.

Palavras-chave: Neurólise ulnar, hanseníase, qualidade de vida

INTRODUCTION

Leprosy was first identified in 600 B.C. in China, Egypt, and India. In 1864 Gerhard Armour Hansen made the correlation between the illness and the infectious agent[1].

Leprosy is the main infectious neuropathy worldwide. It occurs predominantly in developing countries, mainly from Asia, Africa and Latin America, specially India, Brazil, Nepal, Mozambique, Madagascar and Myanmar[1].

The most common complaint is the loss of sensitivity and pain followed by motor impairment.

The motor deficit leads to hands in claw and foot drop. Sensation loss leads to trophic ulcers[2-4].

The ancient social stigma brought by the illness makes diagnosis and adherence to treatment very hard. The historic self-confinement experienced by the patients with the disease - human suffering, social discrimination, economic losses[2]- is the rule.

Although the disease occurs more frequently in adults and young adults, people of all ages can be affected[4]. The detection of leprosy in children younger than 15 years old is an epidemiological evidence of high exposure and disease out of control.

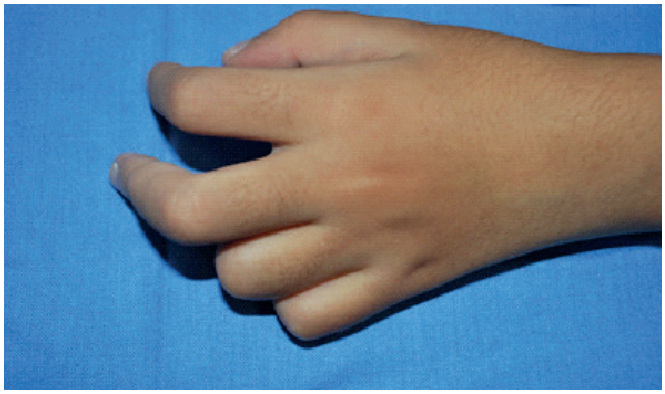
The risk of infection in childhood is increased by living in an endemic area and by the presence of cases in the family or household.

Occurrence of leprosy in children, mainly between 0 and 5 years, denotes inadequate health care and ineffective prophylactic actions[2].

Surgical decompression is a matter of discussion, particularly after 6 months of illness. The objective of this study, then, was to call attention for surgical indication in leprosy patients with ulnar impairment soon after failure of conservative management.

CASE REPORT

A six years old patient was referred to a specialized hospital in leprosy in Salvador, Bahia, Brazil, with pain; claw hand; and thickened ulnar nerve [Fig1].



On physical examination, a hypochromic lesion was found in the left upper limb with lack of thermal and touch sensitivity. The graded nylon filaments showed total loss of sensation in the fourth and fifth finger. Weakness of hand and positive Tinel sign in the elbow were verified. The treatment was started and followed the standard schedule of polychemotherapy for paucibacillary disease with six supervised doses of rifampicin and dapsone, the latter presently with a daily self-administered dose. After examination of possible contacts, the child's father received a diagnosis of tuberculoid type of leprosy being promptly treated.

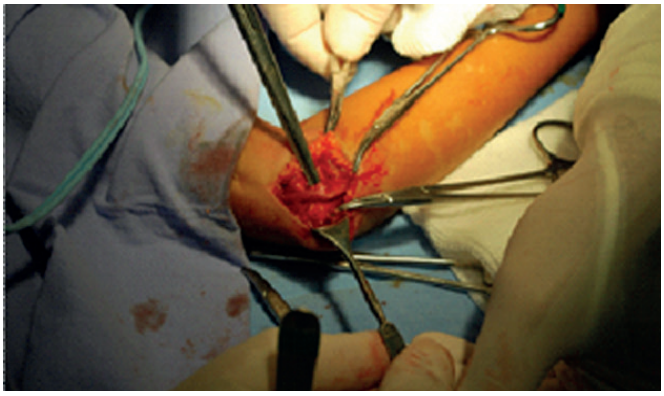
The child undertook three months of prednisone without any improvement in muscular strength, sensibility and pain.

Despite more than one year of treatment with electrical stimulation and fisiotherapy, there was a decrease in touch sensibility allied to physical deformity in hand. We decided to undergo surgical decompression. After the surgery, the patient presented complete recovery of sensation, but had no improvement of the motor impairment and physical deformity.

THE SURGERY

Patient under general anesthesia with the arm flexed and abducted. A curvilinear 2 inches incision in the antero-medial portion of the elbow was made. Freedom of the nerve from the tunnel between the olecranon and medial condyle of umerus by means of section of the Osborn ligament [Fig 2]. The external neurolysis extended proximal and distal until the endpoint corresponding to the motor branch of the

ulnar carpal flexor muscle. The articular branches are sectioned and the branch to the ulnar carpal flexor muscle preserved. The nerve was ventrally positioned and covered with subcutaneous tissue. Running suture with skin closure.



DISCUSSION

Leprosy is a disease that potentially affects adults with a long latency period of 3 to 5 years. However children are prone to acquire the disease especially in places of high prevalence and poor epidemiologic control[5,6].

The surgical decompression is an ancillary method of treatment[7,8] although recent investigations call attention for the similarity of results of conservative management[9].

The Cochrane study involving two randomized studies recognizes the necessity of caution when dealing with results seemed to be not so robust when compared with surgical series in literature[9].

The Cochrane study enrolled 88 patients while surgical series usually comprise more subjects.

It is important to note that leprosy does not necessarily culminates in disabling deformities and a six years old child with neural form and deformity call attention to education gaps, delayed diagnosis and a social-health problem.

Even though the motor impairment didn't show significant improvement, the child' sensation in the upper limb recovered well although the surgery was postponed more than 1 year after diagnosis, contrary to the majority of surgical series which usually operate patients before 6 months of lesion.

The relevance of this case is the acquisition of protective sensation that also improves motor skills in children that have anesthetized superior limbs as in obstetric brachial plexus palsy.

CONCLUSION

Leprosy control is based in promoting economic progress, easier access to health care, reduction of physical injuries and psychological damages, especially in childhood[6].

The surgical intervention is sometimes necessary to avoid deformities although more randomized series must confirm the superiority of surgery in relation to clinical management in some cases[10-12].

The rarity of neural form in children points to necessity of a best public health control and delayed surgical indication must be better elucidated in order to improve sensation very important in children concerning superior limb function restoration.

The children experienced an increase in sensation even after surgery was postponed for 1 year.

The surgical decompression must avoid claw hand especially in childhood.

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