

Control of lymphedema using a cotton-polyester stocking in a patient with a mental disability

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Abstract

The objective of this study is to report on the treatment of lymphedema in a mentally handicapped individual using an inelastic stocking made of a cotton-polyester textile. This 23-year-old mentally handicapped male had suffered from bilateral congenital lymphedema of the legs since the age of seven years old. The edema was most pronounced three years ago, but the patient was not submitted to treatment. On physical examination, swelling was observed from the back of the feet up to the region of the knees; the Stemmer sign was positive. The patient was referred to Clínica Godoy for specialist treatment which included counseling for the family on the importance of hygiene of skin wounds to prevent infection and the use of a low-stretch compression stocking made from a cotton-polyester textile. The patient's adherence to treatment was achieved with the help of relatives and the edema was reduced. Special strategies are required to guarantee the successful treatment of lymphedema in mentally handicapped patients. A key feature in this therapeutic approach is a compression mechanism that gives independence to the patient as the garment can be dressed and undressed without professional assistance.

Keywords: lymphedema, mentally handicapped, compression

Introduction

Disability is defined as a loss or abnormality of structure or function of psychological, physiological or anatomical structures, which can be congenital or acquired, permanent or temporary (1). Changes in mental health have placed those with mental illness and their families as protagonists in a process that seeks to innovate the forms of care; this process counts on a partnership with mental health professionals. Increased assistance has improved the quality of life these individuals but they may have associated diseases, including lymphedema, which should also be treated.

Lymphedema is a chronic disease, defined as the abnormal accumulation of protein-rich fluid in soft tissues resulting from dysfunction of the lymphatic system, an imbalance between the formation of lymph and its absorption in the initial lymphatics (2). Despite the chronicity, when treated, the volume of limbs can be kept within the normal size range. The recommended

management of this disease is a combination of therapies including manual and mechanical lymph drainage, compression, myolymphokinetic exercises and activities, hygiene and preventive measures against infection (3). However, for individuals with mental disabilities there is a difficulty in maintaining an association of therapies due to the lack of self care and often a lack of care by the family too.

The aim of this study is to report on the evolution of lymphedema in a mentally handicapped patient using a low-stretch stocking made of a cotton-polyester textile.

Case Report

We report on a 23-year-old mentally handicapped male patient with bilateral congenital lymphedema of the lower limbs. Lower limb edema was observed from the age of seven however it has been progressively getting worse in particular over the last three years. The patient was not submitted to treatment during this period. His caregiver

over the last 10 years, his stepmother, stated that he has been mentally handicapped since birth and that he has been attending a special school from the age of seven. He is aggressive and the family does not have much control over his behavior even though he is under psychiatric treatment and taking medications. He was evaluated by a vascular physician who diagnosed lymphedema and referred him to the Clínica Godoy for specialist treatment. The therapeutic option was to adjust key clinical measures such as highlighting the importance of hygiene and on care of skin wounds to prevent infection and to prescribe a low-stretch compression stocking made of a cotton-polyester textile (4). Treatment needed to be simple because of the conditions of the patient and his family and because of the limited access to a treatment center. In addition, members of the staff of his school were instructed about these measures.

One relative, one member of the school staff and even the patient himself were trained daily by an occupational therapist on how to put on and take off a compression stocking until the patient was able to dress and undress it alone.

Changes in limb size were evaluated by water displacement volumetry every week for the first month then fortnightly in the second month. The cotton-polyester stocking was used in isolation after guidance to constantly adjust its size as a way to provide greater independence to the patient, family and caregivers. At the start of treatment, the right leg had a volume of 4.235 L and the left leg was 4.056 L. After 30 days of treatment the right leg was 803 g smaller (3432 L) and the left leg was 533 g smaller (3523 L).

Discussion

The present study describes an alternative low-stretch textile used for compression in the treatment of lymphedema of a mentally handicapped patient. This shows the success and difficulties in dealing with this chronic incurable disease; nevertheless treatment can reduce the volume of the limb to a near normal size even in a mentally handicapped patient as long as the patient adheres to treatment. This is a special case where, due to the mental health problem, compliance to therapy does not depend on the patient alone but on his relatives and caregivers.

There are few studies on lymphedema in the mentally handicapped reported in the PubMed, ISI and Scopus electronic databases. One study shows the difficulties of adherence to treatment, where effective and sustained action by the whole team can provide positive results (5). Mental disability is a state where there is a functional limitation in any area of the human brain functioning; individuals are considered below the overall average by

the social system. The handicap may be associated with incapacity or disadvantage, that is, when there are associated physical and social (interpersonal relationship) limitations. This issue deserves the attention of professionals due to the number of individuals who have associations of diseases with mental disabilities; there is a need to create specific mechanisms to provide comprehensive health care for these individuals.

It is not uncommon for the mentally handicapped to have lymphedema; it may be congenital and one aspect of a syndrome. Lymphedema leads to a functional disability when not treated correctly but with treatment it is possible to keep the limb within the normal size range. The consensus is that lymphedema should be treated using a combination of therapies including manual or mechanical lymph drainage, compression, skin care and hygiene, and myolymphokinetic exercises and activities (3). However, in the case of this patient it was necessary to modify the treatment to fit the social, psychological and economic reality of the patient, family and caregivers. Adherence to treatment is extremely important and so the family should be taught about the treatment who, in turn, must constantly demand that the patient follows the required conduct in order for the lymphedema to improve. Often legal measures are necessary to ensure the right of treatment of patients in these conditions.

Conclusions

Mental disability associated with lymphedema requires special strategies to adapt therapy to guarantee a positive outcome. Compression mechanisms in isolation are a key feature in this therapeutic approach because, as the patient and family have greater independence when the patient himself can dress and undress the stocking.

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