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Study on the occurrence, diagnosis and therapeutic approach to the pathology associated with spinal cord injuries

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Abstract

This paper includes a study conducted on 60 individuals with spinal cord injuries, identified by Motivation Romania Foundation and invited to participate in three regional camps, each consisting in a seven days active rehabilitation program. These camps are part of the project "The Wheels of Change Move On – towards appropriate wheelchair provision, sports and accessibility for mainstream participation of Romanians with disabilities", financed by the United States Agency for International Development – USAID. The goals of the program are: to provide independent living training, to identify the recurrence of associated pathology, to generate a customized therapeutic strategy for each participant, to conduct medium term monitoring in order to assess the evolution of the complex therapy the participants benefited from. The results, partly confirming other findings in the literature, showed regional differences that allowed the design of a multidisciplinary therapeutic approach.

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1. Introduction

The therapeutic approach of the pathology specific to individuals with spinal cord injuries is very little studied in our country (Mologhianu, 2007) compared to the specialized literature (Greenspan et al., 2001), the biggest majority of which doesn't focus on multidisciplinary and independent life coaching. The present study was conducted in order to provide accurate data about the incidence of this pathology in our country, and to advocate

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for the development of the access to information regarding the means of improving the quality of life for people with spinal cord injuries.

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2. Material and methods

2.1 Subjects

From July to August 2012, Motivation Foundation organized, in three different locations – Văratec (Moldova region), Bran (Muntenia region) and Mehadia (Banat region), camps for 60 people with spinal cord injuries, all being wheelchair users. These camps are organized within the project “The Wheels of Change Move On – towards appropriate wheelchair provision, sports and accessibility for mainstream participation of Romanians with disabilities“, financed by the United States Agency for International Development –USAID. The 60 beneficiaries have been identified by the regional Motivation employees, who invited them to participate in a complex 7 days program of independent living training combined with health assessments. In Văratec we had 20 participants, 14 men and 6 women, aged 14 to 43. At Bran there were 23 participants, 17 men and 6 women, aged 21 to 41, while in Mehadia we had 17 participants, 13 men and 4 women, aged 18 to 44. The study was conducted according to Helsinki Declaration regarding research ethical principles that involve human subjects. All participants agreed to be the subjects of this study.

2.2 Methods

The assessments were conducted according to the evaluation sheets developed by specialists in recovery-rehabilitation, orthopedics and nutrition. Nutrition - Each participant completed a questionnaire of 21 items related to their nutrition and general lifestyle. The screening process included various weight and height measurements, and their BMI was determined. Based on the results, each of them received a personalized diet, basic information on nutrition and hydration, and they were instructed on how to achieve and maintain a healthy life-style. Clinical rehabilitation: Each participant was screened based on a questionnaire regarding: the associated pathology, physical exercise routines, bone density measurement (BDM) with Sahara equipment, heart rates (HR) and blood pressure (BP), muscular tonus evaluation, strength test using the palmar dynamometer. Orthopedics: The orthopedic clinical exam was aimed to highlight any disturbance of static spinal and eventual consecutive complications. The participants went through a physical assessment process, screening of the centripetal and centrifuge joints and sitting position check.

3. Results

The assessment of nutritional status highlighted the following: the majority of the participants were overweight, with obesity tendencies; most of them do not have healthy diet habits: they do not eat enough fibers, vegetables and fruits; there is a lack of dairy products in their diet; while most of them have a very rich diet in protein and animal fat; a big percentage of the screened participants have a risk of diabetes and cardiovascular disease; most of them do not have a habit in physical activity practice; signs of depression were observed and family dependence.

The results of the orthopedics exam show that the lack of degenerative diseases, emphasized by obvious clinical and radiological changes; also a righteous sitting position in 80 % of the cases; frequent spinal deviations

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