CORRELATIONS OF THE FUNCTIONAL DEFICIT, OF THE PAIN, OF THE QUALITY OF LIFE WITH PSYCHO-AFFECTIVE DISORDERS SEEN IN PATIENTS WITH SPINAL CORD INJURY (SCI)

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Keywords: *spinal cord injury (SCI), self-esteem, quality of life, motor deficit, depression*

Abstract: *The present paper has the purpose of pointing out the benefits of the complex recovery programme of the patient who suffered a spinal cord injury and establishing some correlations between increasing the level of physical and psychological functionality, correlations that would have a predictive value. Material and method. 80 patients from the Medical Recovery Hospital Băile Felix who were diagnosed with spinal cord injury were included, and evaluated before and after 6 months of recovery treatment. For the evaluation, we used the Visual Analogue Scale (VAS) scale, the Functional Independence Measure (FIM) score, the Beck score, the Morris Rosenberg scale, the Health Assessment Questionnaire - HAQ score. Results and conclusions. The self-esteem evaluated for the patients with spinal cord injury is directly correlated with the quality of life and the duration of the injury, it drops proportionally with the increase of the motor deficit and with an increase of pain. The depressive disorder becomes more severe at the same time with the motor deficit, with the increase of pain and decreases together with the increase of the quality of life, the increase of the duration of the injury.*

INTRODUCTION

It is well known the fact that a spinal cord injury with myelic involvement determines dramatic disability effects, and the treatment involves high costs. These have led to a worldwide increase in the interest to make the recovery of the patients suffering from spinal cord injuries more efficient. The motor deficit, the paraplegia or tetraplegia, that follow SCI leads to a series of psychological disorders that can be: personality change, emotional disorders (depression, a drop in motivation and self esteem, emotional instability), anxious disorders (anxiety, panic attacks, post trauma stress), somatoform disorders, and sometimes even atrophy of the cognitive system.(1,2)

PURPOSE

The present paper has the purpose of pointing out the benefits of the complex recovery program of the patient that suffered a spinal cord injury, (programme that contains: kinetotherapy, occupational therapy, psychotherapy, electrotherapy, hydrokinetotherapy, massotherapy, thermotherapy) and establishing some correlations between the increase in the level of physical and psychological functionality for these patients, correlations that would have a predictive value.

METHODS

The study is a cohort type, descriptive, having prospective elements, and has the purpose to show the relationship between the physical and psychological characteristics of a group of 80 subjects, hospitalized at the Rehabilitation Hospital Băile Felix, in the period 2010-2013, with ages between 17-70 years old, diagnosed with spinal cord injury, that we evaluated two times: at the beginning of the study and after 6 months.

For evaluation, we used the VAS scale for pain, the FIM score for motor evaluation. Concerning the emotional disorders we evaluated the depression with the help of Beck score, the self-esteem with the help of Morris Rosenberg.

An important objective of this study was to evaluate the quality of life of the patients, using the Health Assessment Questionnaire (HAQ) score, which evaluates the remaining functional capacity of self care and of dealing with daily activities.(3)

RESULTS

Self-esteem

Our self esteem or "the way we see ourselves", talks about, as we can already see, the way we perceive our own physical, emotional, cognitive, social and spiritual characteristics.(4)

An important role in building up the self image is represented by the acknowledgement and satisfaction of the main needs of the man just as A. Maslow (1968) pointed them out in the human hierarchy of needs. In the version adapted by the Romanian psychologists:(5)

- X. The need of ideal, of heroes, perfection, high values of the human kind
- IX. The need of fulfilment (self accomplishment, become what you can become in order to feel accomplished)
- VIII. The need of social action (social intelligence, acceptance as social individual, social integration)
- VII. The need for morality (knowledge, esthetics and ethics, rules that maintain the social order)

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- VI. The need for social utility, prestige, success through a career, school
- V. The need for internal dynamic balance towards opening to the world (balance between micro and macro, between individual and social)
- IV. The need for proximity (affiliation to a group, the need for a friendly space, of accreditation)
- III. The need of identity (family – knowing and accepting the origins as grounds for modelling the personal identity) or the "need of identity or self image" (K. Horney)
- II. The need for internal harmony, self confidence and confidence in general (being able to organize your life without fear for dangers), the need of a partner, or "the need for affection and approval for interior balance" (K. Horney)
- I. Physiological needs (food, shelter, clothing, hygiene, sex) translated into the need of independence and freedom, or 'the need of freedom and superficiality' (K. Horney).

We can notice that the inferior (physiological) needs are imperious and are compulsory.

We can, thus, understand why self-esteem may be affected after a SCI, the motor deficit implied, is affecting beginning with the base of the pyramid, all the presented levels.

In the present study, we looked at how self-esteem is influenced once with the evolution of pain.

A reversed correlation was determined between the pain score and the self-esteem score (r=0.36), meaning, as it was expected, that the higher the pain score is, the functional impotence is greater and the self-esteem score drops.

Figure no. 1. Pain score – self-esteem correlation

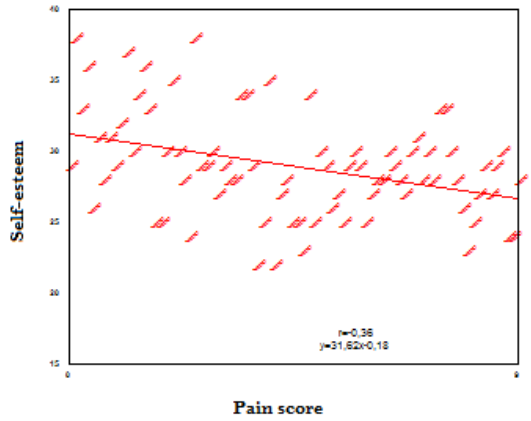
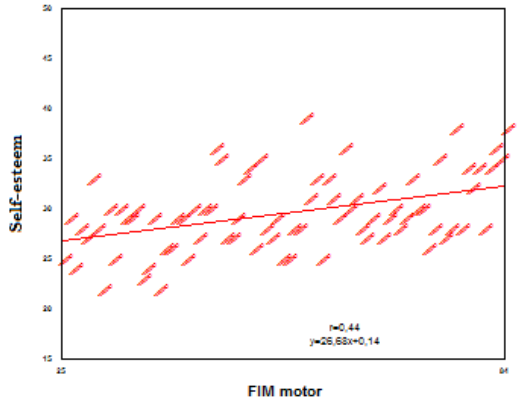


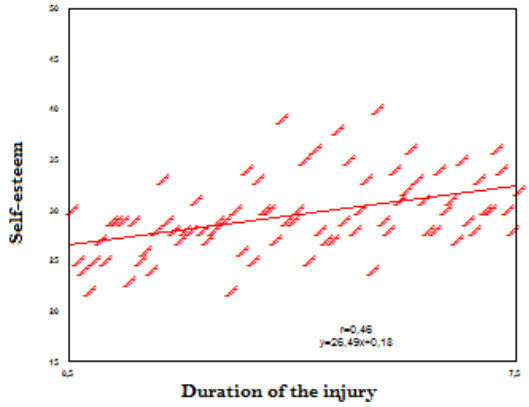
Figure no. 2. FIM correlation – motor score – self-esteem



Concerning the motor deficit, the smaller this is, the greater is the ability of the patients to perform some activities; this can be noticed from the direct correlation between the FIM motor and the self-esteem score (r=0.44), meaning that the more the FIM motor score increases, the better the self-esteem becomes.

A proof of the benefits of the recovery treatment is the direct correlation between the duration of the injury and the score for the self-esteem (r=0.46), meaning the more the injury prolongs, the more the self-esteem score increases.

Figure no. 3. Duration of injury – self-esteem correlation



Depression

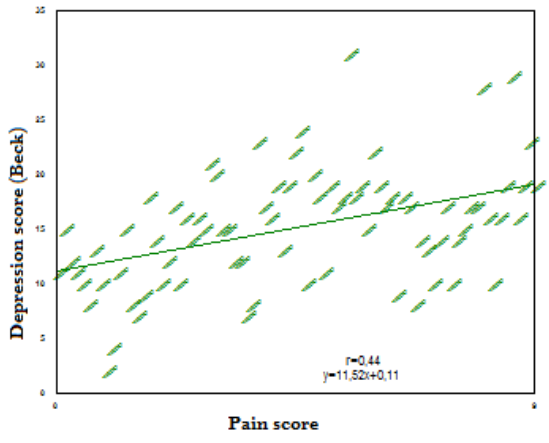
It is well known the fact that the prevalence of pain met in the depressive people and of depression met in the patients suffering from chronic pain is greater than any condition taken individually.

In the depressive image, we often see painful somatic manifestations, what we call depression syndrome – pain. There is a mutual influence between the two pathologies.(6)

The symptomatic increase caused by depression to the chronic pain, leads to several pain manifestations, an increased intensity of pain and a prolonged time of pain.

The risk of depression in patients with chronic somatic disorders is higher and the probability increases together with the gravity of the somatic disorder.(7)

Figure no. 4. Pain score – depression score (Beck) correlation



The results of our study are in accordance with the information found in literature, because we obtained a direct correlation between the pain score and the depression score (Beck) (r=0.44), meaning that the higher the pain score, the more the depression score increases.

The more sever the motor disorder is, the more severe the depressive disorder becomes.

Our study demonstrates through reversed correlation (r=0.38) of the motor FMI score with the Beck score for depression, the fact that once with the increase of the functional independence the depression score drops.

Once with the increase in duration of the injury, the increase of the functional independence, the score of depression drops as well, demonstrated through the reversed correlation between the two parameters (r=0.58).

Quality of life

The SCI represents the cause of one of the most dramatic neurologic images, their gravity being determined by the characteristics of the cord injury and the level of the injury.(8.9)

Figure no. 5. FIM correlation – motor score – depression score (Beck)

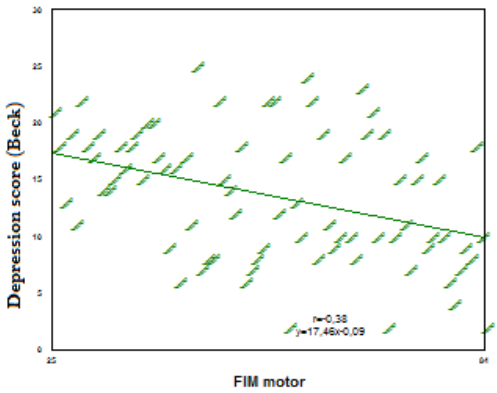
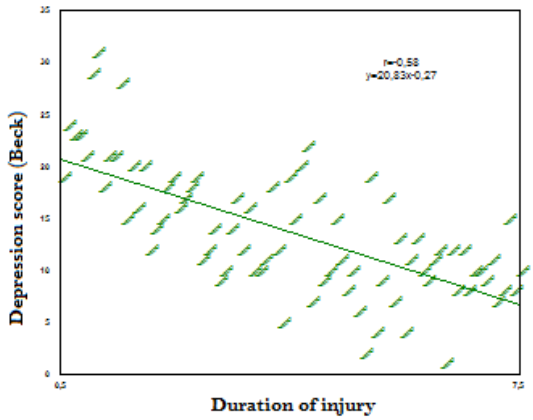


Figure no. 6. Duration of injury – depression score (Beck) correlation



The pain for the patients suffering from SCI is met in almost all versions possible, from severe pain connected to injury of the tissues, to different types of cephalalgias and especially cord type pain. The types of pain fall into the following distinct categories:(10) diffuse pain; segmental pain; radicular pain; visceral pain; neuragen pain (also called neuropathic pain).

The pain is met among a large number of the persons that suffer from a tetra or paraplegia, oftentimes stopping the affected persons from regaining the optimum level of activity, which leads to a drop in the quality of life.

Our study demonstrates a direct correlation between the pain score and the score for the quality of life (r=0.41), meaning that the higher the pain score is, the more the quality of life score increases, meaning the quality of life is lower and a reversed correlation between the FIM motor score and the quality of life score (r=0.53), meaning that the higher the FIM score is, the more the quality of life score drops, resulting in the improvement of the quality of life once with the increase in the degree of functional independence.

We determined a direct correlation between the duration of the injury and the quality of life (r=-0.43), meaning that the more the injury duration increases, the quality of life score drops, meaning the quality of life improves.

Figure no. 7. Pain score – quality of life correlation

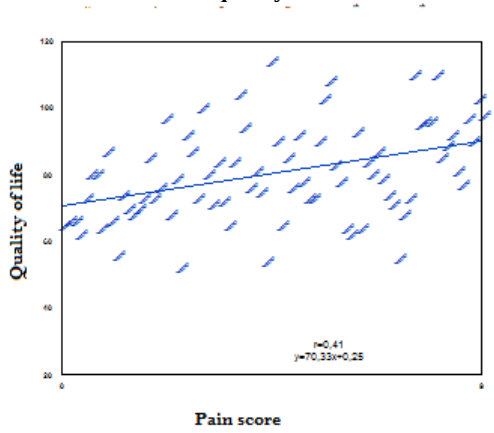


Figure no. 8. FIM – motor score – quality of life correlation

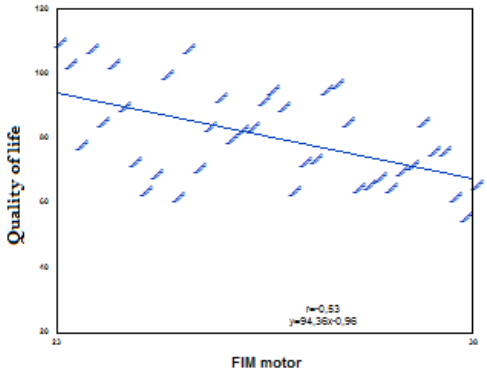
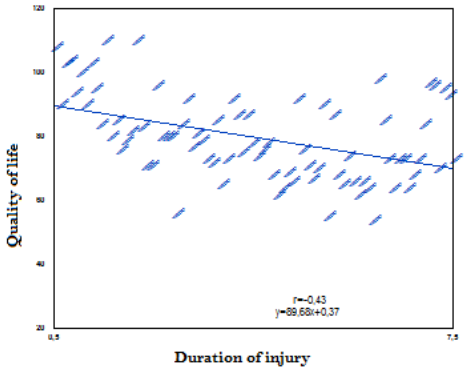
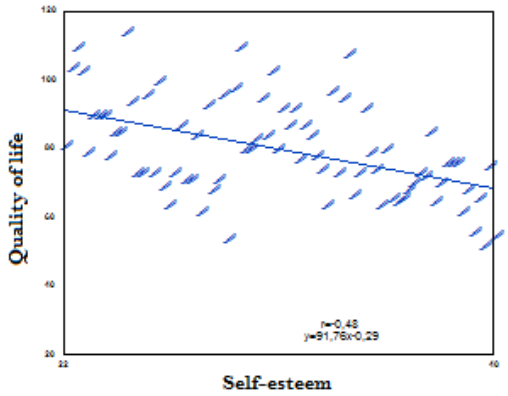


Figure no. 9. Duration of injury – quality of life correlation



The performed study demonstrates that once with the increase in the quality of life, the self-esteem of the patient also increases; the graphic representation shows a reversed correlation between self-esteem and the quality of life score (r=-0.48).

Figure no. 10. Self-esteem – quality of life correlation



CONCLUSIONS

Self-esteem evaluated among the patients suffering from spinal cord injury is directly correlated with the quality of life and the duration of the injury, it drops proportionally once with the increase of the motor deficit and with the increase of pain.

The depressive disorder becomes more severe together with the motor deficit, with the increase of pain and drops once with the increase in the quality of life, the increase of the duration of the injury.

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