CLINICAL ASPECTS

RE-EDUCATION OF BALANCE IN ORTHOSTATISM AND WALKING IN THE PATIENTS WITH DEGENERATIVE DISEASES OF THE LOWER LIMBS

NADINA PAULA LICULESCU

Prof. dr. “Dimitrie Gerota” Emergency Hospital, Bucharest

Abstract: Balance in orthostatism and walking are both affected in the early stages of lower limbs osteoarthritis. Kinetotherapy can play a major part in the re-education of these disorders, being besides the medication treatment, an important condition to improve the quality of those patients’ lives. We consider that one of the most important aspects of the kinetotherapy programme is the proper dosage of the exercises, taking into consideration the fact that fatigue can be a negative factor in the recovery process of the people with degenerative diseases of the lower limbs.

Lequesne Index is being used to estimate the level of osteoarthritis of the lower limbs and it is based on criteria such as: pain/discomfort, maximum distance walked and difficulties in performing the daily activities. Lequesne algofunctional index dedicated to lower limbs osteoarthritis is graded with *0 when the patient has no difficulty in doing the activity, from 0.5 to 1.5 according to the level of the disorder and with 2 when the activity is impossible to be performed.

The complex treatment of the patients with osteoarthritis follows a series of objectives, through which we are trying to improve the balance in orthostatism and the walking, acting upon those mechanisms which permanently need stimuli in order to preserve the functions and prevent their deterioration.

The effect of the kinetic protocol is based on the achievement of the main goals of the study: Re-education of the body balance in orthostatism

The objectives of the recovery programme

The starting point of this research was the assumption that, in the incipient stages of lower limbs osteoarthritis, a rigorous programme of kinetotherapy, along with a personalised dosage applied daily, can have pregnant and beneficial effects capable to restore the balance of the body and of walking in the persons with degenerative diseases found in the stages 1-2, according to the Lequesne Index, materialized both by increasing the scores according to the Berg Scale and by the lowering of the number of seconds necessary for the “Timed Up and Go” Test.

I accomplished a very ample study and one of interest has been made on the patients with lower limb osteoarthritis in different stages of the disease when kinetotherapy sessions can be effective, this study trying to bring a theoretical and practical contribution to the medical literature on kinetotherapy as a factor of treatment in the degenerative diseases.

METHODS

A number of 113 patients has been studied (58% women and 42% men), having the same clinical diagnosis and the same stages of disease, presenting similar symptomatology, between the stages 1-2, according to the Lequesne Index, which represented a major criteria of selection.

24th sessions of specific kinetotherapy took place daily, between February and March 2011, the programme starting after an initial evaluation.

The final evaluation took place after the 24th sessions, all the patients included in this study being tested.

In the evaluation process, I have used both the Berg Test in order to evaluate the balance and the “Timed Up and Go” Test, considering that these are amongst the most frequently tests used at global level.

Keywords: balance in standing, osteoarthritis, Lequesne scale, Berg test, echilibrul static, artroză, testul Berg

Lequesne, scale

Cuvinte cheie: echilibrul în stând; artroză; Lequesne, testul Berg.

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The exercises of the kinetic programme are focused mainly on the following secondary objectives:

- training the sensitive and sensory systems;
- training the proprioceptive information;
- training the visual information;
- training the vestibular information;
- controlling the centre of gravity;
- training the balance reactions;
- walking re-education;

Among the included objectives, we can mention the following:

- pelvic step re-education;
- re-education of steps equalisation;
- re-education of each stage of walking according to the case.

RESULTS

After the final testing according to the Berg scale, I
have noticed a difference between the final scoring of 9.38 points, which indicates a good progress. The patients have registered different scores, considering the fact that they were at different stages, but the average values obtained at the final test pleads for the effectiveness of the kinetotherapy programme.

Regarding the “Timed Up and Go” Test, I have noticed progress both in grades and time. The differences in seconds are notable for the patients, the average values between the initial and the final evaluation being of 6.62 seconds.

There have been patients who registered lower values of 12 and 13 seconds in this test, a situation which indicates significant increases of the walking speed in safe conditions. These results confirm the primary hypothesis and implicitly prove the efficacy of the kinetic treatment based on the re-education of the body and walking balance, which has a major importance on the prevention from falls.

CONCLUSIONS

We believe that the “Timed Up and Go” Test clearly indicates the results obtained, by reducing the duration of the test performed in safe conditions.

We believe that kinetotherapy programmes, early implemented in the treatment of a person with degenerative diseases of the lower limbs, can help him/her to find the necessary resources to face the disease in the first 2 stages, according to the Lequesne Index.

BIBLIOGRAPHY