

VI. STRESZCZENIE W JĘZYKU ANGIELSKIM

Functional assessment of patients undergoing rehabilitation due to gonarthrosis in the light of scientific and posturographic research

Introduction: Osteoarthritis is one of the most common causes of disability in people over 60 years of age, and the knee joints are one of the main locations of degenerative changes in the human body. In addition to pathological processes involving the osteoarticular system in the course of OA, balance and stability disorders related to the loss of proprioception are a significant problem. The consequence of them is increased risk of falls. Balance analysis using clinical tests is routinely performed in everyday medical practice, but unfortunately these methods are subjective and reliability depends on the examiner. It seems promising to use a stabilometric platform or mats to objectively assess imbalances. Properly conducted posturographic diagnostics enables early application and proper planning of functional procedures for correct action on the exact problem of the patient with abnormalities in the course of OA of the knees.

Aim of the study: The aim of the study was to assess the impact of rehabilitation on the efficiency and benefits of patients with knee OA using a standard examination, including applied tests, and a posturographic examination carried out on a stabilometric basis (strain gauge mat) in the norm for healthy people.

Material and methods: Participants (n=166) were divided into two groups - control (n=41) and study, in which a random assignment was made to one of three groups - "Insoles" (n=43), "Exercises" (n = 43), " Insoles and exercises" (n=39). In order to assess balance disorders and the effects of the applied rehabilitation, the following were used: the patient's own Examination Card containing functional tests, Berg's balance scale and assessment of the quality of life and functionality using the KOOS questionnaire. A posturographic examination on a tensometric mat was also performed. Diagnostics was carried out twice - before and after 6-week therapy.

Results: Statistically significant differences were obtained in the functional and posturographic assessment of patients compared to those in the control group ($p<0.05$), and a beneficial effect of the therapy was demonstrated ($p<0.05$). The highest effectiveness was obtained in the group of people performing exercises and using orthopedic insoles at the same time.

Conclusions: In patients with knee osteoarthritis, there are balance deficits visible in posturological and clinical tests, and the use of rehabilitation allows for their reduction.

Key words: posturography, balance, gonratosis, knee, rehabilitation, training, core, orthopedic insoles