8.2.Streszczenie w języku angielskim

The aim of the study was to compare the efficacy of focused shock wave fESWT with radial rESWT in the treatment of symptoms of PA inflammation caused by heel spurs in people of working age. For this purpose 60 people were qualified for the study using uniform inclusion and exclusion criteria, and randomly assigned to two parallel therapeutic groups, each consisting of 30 people. The following parameters were examined before the therapy, 1 week after the therapy and 3 months after the end of the therapy: pain, functions and health status of the foot with PA inflammation, quality of life of people with PA inflammation, ranges of movement of the ankle joint in unloading and loading with one's own body weight of the foot with PA inflammation, as well as circumferences of the lower limb infecte d with PA inflammation. The treatment used original and unified parameters of the two applied therapies fESWT and rESWT for 5 weeks. The verification confirmed the accuracy of the selection and usefulness of the research methods in comparative randomized studies. Characterized by very high reliability and validity of the assessment of the studied psychometric and functional features they enable an objective assessment of the effectiveness of fESWT and rESWT in the treatment of PA inflammation, as well as allow to demonstrate which of them is more effective. The fESWT and rESWT applications showed a very good analgesic effect in the observed study period. However, the doses of fESWT delivered to the patients reduced the intensity of pain more effectively. This observation has an important implication for the practice of physiotherapy, so that in people with PA inflammation, focused shockwave should be used for pain relief first and foremost. fESWT and rESWT significantly improved foot functions. However, fESWT was more effective to improve the health status and function of the foot with PA inflammation in the observed period of time, i.e. up to 3 months after the end of the therapy, which is confirmed by the obtained therapeutic effects between the groups. The studies have shown that both fESWT and rESWT significantly improve the quality of life of patients with PA inflammation, although fESWT is more effective in improving the quality of life of people with PA inflammation in the observed period of time, which is particularly visible in the lasting health effects up to 3 months after the end of the therapy. Both therapies improve in a similar way and statistically significantly the functional capacity/locomotion efficiency of people with PA inflammation in 3 consecutive measurements. In both groups positive effects were maintained 3 months after the end of the therapy. Despite this, patients from the fESWT group achieved better therapeutic effects. Therefore, it can be said that in order to improve more effectively the functional capacity of people suffering from PA inflammation a therapy based on fESWT should be used. The results showed that in the observed period of time both fESWT

and rESWT effectively increased the ranges of painless movements of the foot with PA inflammation in non-weightbearing and weight-bearing. However, no differences in results were observed between the groups. The only exceptions are statistically significant differences in flexion between the groups after the therapy in favor of patients treated with rESWT and pronation 3 months after the end of the therapy in favor of patients treated with fESWT, which may be coincidental. Although both therapies effectively increase painless ranges of foot movement with PA inflammation, it should be emphasized that greater therapeutic effects were observed among the patients treated with fESWT. The comparison of changes in the circumferences of the lower limb with PA inflammation between the fESWT and rESWT groups in 3 subsequent measurements showed that the decrease in circumferences in different places measured on the lower limb was different in both therapeutic groups. It should be said that both therapies similarly reduce the circumferences of the forefoot, ankle joint, midfoot, and forefoot of the lower limb with PA inflammation. However, the therapeutic effects, although small, indicate that rESWT is more effective in reducing the circumferences of the lower limb with PA inflammation. The obtained results of our own research indicate that the applied applications of the two types of shock waves should be used in the treatment of PA inflammation because they are effective, what is an important disposition for physiotherapy practice to maximize the health effects of patients in accordance with their expectations and personal preferences.

Key words: PA inflammation, ESWT therapy, pain, foot health status, quality of life, ranges of motion, circumferences.