I. Streszczenie w języku angielskim

The ankle joint is one of the most vulnerable joints in the human body. The problem of its traumatisation should therefore be considered not from an anatomical perspective, but also from a holistic viewpoint, taking into account the functional state of the foot and more distant fascial structures. Deteriorated proprioception of the ankle joint is related to insufficiency of stabilising muscles, which at the same time influence the lowering of the arches of the foot. The incidence of injury is higher in women than in men, which may be related to the effect of oestrogen. The aim of the study was to determine the relationship between the phase of the menstrual cycle and plantocontourgraphic parameters of the foot, proprioception of the ankle joint with a specification of eight sectors, and postural stability of women using (n=18) and not using (n=20) oral contraceptive pills (OCP). A self-administered questionnaire survey, Beighton scale hypermobility assessment, International Physical Activity Questionnaire IPAQ long version were used in the study. Plantocontourgraphic parameters were assessed using the CQ-Stopy podoscope. Proprioceptive and stabilometric analysis was performed using the PROKIN TecnoBody system platform.

The results obtained were considered from two perspectives. Firstly, the influence of OCP use on parameters assessed in particular phases of the menstrual cycle was evaluated by analysing intergroup differences in results obtained in the test conducted during menstruation, in the middle of the cycle in OCP-users or at the time of ovulation in women OCP-non users, and one week after the second test. Secondly, differences between the studies were determined separately in each group and whether taking OCP significantly affects the differences between the results obtained in the different phases of the menstrual cycle.

The results obtained indicate worse proprioceptive control in the first days of the cycle in the group OCP-non users. In the third study, OCP-users had statistically significantly worse control of ankle joint movement than OCP-non users. The significantly worse results indicate a bilateral greater difficulty in correct inversion movement in the group of OCP-users in study three. In each study, the group of OCP-users showed worse stability in the medial-lateral direction in both amplitude and sway velocity. The pooled difference results showed a significantly greater reduction of the foot during ovulation relative to menstruation and ovulation relative to the luteal phase in women OCP-non users. The sectoral trace error and sectoral force variation scores in OCP-non users were higher in study one than in study two, indicating poorer proprioceptive control during menstruation relative to ovulation.