CORRELATION BETWEEN THE ASTHMA CONTROL TEST SCORE AND RESPIRATORY PARAMETERS IN PATIENTS TREATED IN THE “WIELICZKA” SALT MINE

M. Kostrzon[1], K. Czarnobilski[2], M. Kmiecik[1], E. Czarnobilska[3]

[1]Wieliczka Salt Mine Health Resort, Wieliczka, Poland, magdalena.kostrzon@kopalnia.pl

[2]SP ZOZ MSW Hospital, Krakow, Poland;

3Department of Clinical and Environmental Allergology, Jagiellonian University, Krakow, Medical College, Poland

Aim: Asthma affects more than 5% of the world’s population. According to asthma guidelines the main goal of pulmonary rehabilitation is the optimum asthma control. The Asthma Control Test (ACT) is a standarised five-item questionnaire for the assessment of asthma control. The study compared the pre- and post-treatment (subterraneotherapy) ACT score with other conventional parameters including spirometry, PEF rate, fractional exhaled nitric oxide (FENO).

Methods: The study included 21 patients with asthma who underwent three-week long pulmonary rehabilitation in the Wieliczka Salt Mine since April 2013 to June 2014. The patients completed the ACT questionnaire before and 2 weeks after subterraneotherapy. They underwent testing for FENO, PEF and spirometry (before and 2 weeks after subterraneotherapy).

Results: The mean change in ACT score was 2,38 (SD 2,92). The mean change of ACT in patients with poorly or moderate controlled asthma (N = 10) (ACT score <20) was 4,40 (SD 2,86, p = 0,042). There was statistically important correlation between ACT difference and FEV1 difference (r =0.461); VC difference (r = 0,561) and MEF75 difference (r = 0,532) observed.

Conlusions: The ACT change correlates with the difference of some respiratory parameters (FEV1, VC, MEF75). The pulmonary rehabilitation program helps to control asthma in patients suffering from poorly or moderate controlled asthma. The results should be confirmed through the study of bigger group of patients