

EVALUATION OF FUNCTIONS OF RESPIRATORY SYSTEM IN DIFFERENT GROUPS OF PREGNANT WOMEN ON THE BASIS OF SPIROMETRY TEST - PILOT STUDY

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Introduction: Respiratory disorders which occur during the pregnancy are connected with its physiology. Every second pregnant woman suffers from dyspnoea on exertion, and in 20% of them - also dyspnoea at rest. Furthermore, the aforementioned symptoms may significantly intensify in obese patients, which results from the excessive weight both before and during the pregnancy. Smoking also influences the intrauterine foetal development by causing its stasis. The occurrence of respiratory disorders in pregnant women may influence the well-being of foetus by reducing the oxygen transportation through the placenta. There are not many researches carried out which evaluate how the lifestyle (small physical activity, sedentary mode of working, no outdoor exercise, staying in closed rooms for several hours, obesity, overweight) influences the disorders of functions of respiratory system in pregnant women. **Goal:** The evaluation of functions of respiratory system in pregnant women on the basis of spirometry test and the answer to the question whether active participation in the schools of birth, factors which may overload the respiratory system such as obesity before the pregnancy, too significant gain in weight during the pregnancy, smoking before the pregnancy, and age of becoming pregnant influence the functions of respiratory system during the pregnancy. **Material and Methods:** Pregnant women qualified for tests were in the 2nd and 3rd trimester of pregnancy and did not have the accompanying conditions such as bronchial asthma, deformations within the chest (kyphosis, scoliosis), catarrhal disorders of upper respiratory tracts. The qualification for tests was carried out among the pregnant women hospitalised in high-risk pregnancy units and among healthy pregnant women attending the schools of birth. The pregnant women filled in the clinical questionnaire where they entered anthropometric parameters, data concerning their pregnancy, medical history, stimulants, physical activity before and during the pregnancy, and the respiratory problems during the current pregnancy. Static and dynamic spirometry tests were carried out with the use of portable spirometer of Lungtest 500 made by MES, with the use of sterile mouthpiece and sterile pneumotachograph head. **Results:** The tests were carried out in 54 pregnant women. What draws attention in the group of all tested pregnant women is the reduced value of VC and ERV. The participation in the schools of birth had significant positive influence on the IC. In the group of smoking pregnant women - as opposed to other groups of pregnant women - there was found a significant reduction of the Tiffenau ratio. High BMI before the pregnancy and too significant gain in weight during the pregnancy, age of becoming pregnant, and pregnancy diabetes have not shown the influence on the worsening of spirometry parameters during the pregnancy. **Conclusions:** (1) The observed reduced values of VC and ERV in all tested pregnant women may suggest the disorders of restrictive nature in the course of physiological pregnancy, (2) Smoking before the pregnancy may cause the disorders of obstructive nature during the pregnancy, (3) The participation in the schools of birth has significant positive influence on the values of inspiratory capacity in pregnant patients.