

EXHALED BREATH TEMPERATURE AS AN INDICATOR OF EXACERBATION IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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Inflammatory lesions in airways of patients suffering from COPD influence the blood flow in the bronchial blood vessels, which may evoke changes of the exhaled breath temperature (EBT). So far, little is known about the changes in the EBT in course of COPD. The aim of the study was to analyse EBT values in COPD patients with and without exacerbation. The measurements of EBT were performed in 106 COPD patients. The patients were divided into 3 groups: I during exacerbation of COPD; II included 30 patients in a stable period of COPD. Group III consist of 42 healthy volunteers. The highest EBT mean value (33.80C) were identified in healthy volunteers. The study showed, significant decrease of EBT after recovery of COPD exacerbation - 0,590C, $p < 0,001$, We observe significant difference between EBT and the spirometry - EBT vs FEV1 $r = 0.65$, EBT vs FVC $r = 0.58$ ($p < 0,05$). The usefulness of the measurement of the EBT in COPD patients requires further research. It seems that EBT may be helpful in the early detection and monitoring of COPD exacerbations. Therefore it could be presumed that would be simple, noninvasive test EBT for COPD patients to monitor their condition at home.