BRONCHODILATOR REVERSIBILITY IN BRONCHIAL ASTHMA AND CHRONIC OBSTRUCTIVE PULMONARY DISEASE: LITERATURE REVIEW AND OWN DATA

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Abstract

Aim. The purpose of the study was to establish the value of bronchodilator reversibility test (RT).

Material and methods. We reviewed the literature to establish the role of the reversibility test for the differential diagnosis of bronchial asthma (BA) and chronic obstructive pulmonary disease (COPD). 106 patients with previously established diagnosis of COPD, mean age 58,9 ± 13,7 years, 78 (73.6 %) men were examined. A spirometry was performed according to the ATS/ERS standards with estimating FEV_1, FVC and FEV_1/FVC. RT was done according to current guidelines with 400 mcg of salbutamol. Post-bronchodilator FEV_1/FVC value < 0.7 was considered as a criterion of irreversible bronchial obstruction. The test was considered positive if post-bronchodilator FEV_1 value increased ≥ 12 % and ≥ 200 ml. The diagnosis was revised according to the results of spirometry and RT.

Results. The literature review revealed two concepts of RT results interpretation: "the reversibility of obstruction" and "the response to bronchodilator." RT is a mandatory diagnostic procedure: it significantly improves the quality of diagnosis of COPD and BA. However, the results of the RT cannot always be used as a reliable differential diagnostic criteria. The quality of COPD diagnostics in general practice is poor. Conducting adequate spirometry with RT allowed us to exclude the COPD in 59 % patients, diagnosed with COPD by primary care physicians. Among excluded cases 20 % were BA, 39 % of cases required further examination. Among patients with confirmed COPD an irreversible obstruction with a significant response to bronchodilator was observed in 34 % of individuals.

Conclusion. RT is a valuable diagnostic tool for the diagnosis of COPD but it requires a balanced assessment in order to distinguish between BA and COPD.

Key words: Chronic obstructive pulmonary disease, bronchial asthma, spirometry, bronchodilator test.

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