Summary

Phenotypic assessment of patients with severe chronic obstructive pulmonary disease with using HRCT of the lung

Aim

Chronic obstructive pulmonary disease (COPD) is very important societal and economic problem worldwide. The main risk factor form COPD is tabacco smoke. CODP patients are very heterogenic group with different clinical symptoms. Due to different dominant clinic symptoms it is important to sort out patients to different groups – phenotypes. However differentiation into phenotype groups is not unified. Also using computed tomography (CT) in COPD diagnosis is not routine. The aim of this study is to assess if CT should be one of the basal paraclinic method used in diagnosis of all COPD patient.

Materials and methos

Patients from Czech multicentre research database of severe COPD which is registered on www.clinicaltrials.gov with number NCT01923051were analysed. The analysis of CT scans with clinical symptoms and lung functional tests was performed.

Results

From May 2013 were 784 patients included to the database. Completelly 359 patients had CT examination and lung functional tests. More than two thirds of patients (69,4 %) were dyspnoeic even during walk on level ground. Most of the patients were i GOLD group C and D. We have found bronchiectasis on CT in 120 (37,4 %), lung emphysema in 247 patients (75,5 %) and bronchiectasis and emphysema together in 92 patients (28,7 %). Using only clinical and lung functional examination assessment, bronchiectasis were recognised only in 16,8 % and lung emphysema only in 72,5 % of patients.

Conclusion

The leading cause of personalizing treatment of COPD patients is huge heterogenity of these patients with different quality of life and different prognosis. Because of some difficulties to perform clear clinical diagnosis of lung parenchyma disorders, CT should be integral part of COPD diagnosis.