

In conclusion, using predictive models, it was possible to develop a risk-stratification index that accurately predicted COPD progression. This model can provide decision-making about future in COPD patients with high reliability looking clinical data of beginning.

E4668

Peak expiratory flow value and relationships between functional parameters in COPD

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We aimed to find out relationships between results measured with portable PEF custom, spirometric parameters, SGRQ and SF36 health quality index, 6 MWT and dyspnea index prospectively in COPD patients.

We evaluated a total of 605 cases (509 COPD patients, 96 healthy control group). Correlation coefficient (r value) between the percent of predicted measured with PEF meters (PEFp%) and measured with spirometry for FEV₁%, FVC%, FEV₁/FVC, PEF%, PEF₂₀%, PEF₅₀%, PEF₇₅% and PEF₂₅₇₅% were 0.789, 0.635, 0.726, 0.813, 0.794, 0.741, 0.649, 0.749 respectively (p<0.000). In COPD patients correlation between FEV₁% and PEFp% were stronger in cases with age <65 years than ≥65 years, in males than females, emphysema than chronic bronchitis and mix, in literated cases than uneducated, healthy than patients with comorbid diseases (p<0.000). We found a linear relation as FEV₁% = 12.64(0.716 x PEFp%). COPD patients who's predicted FEV₁ were less than 80% had also predicted PEFp value less than 80% in 91.1% of these patients. If we compare FEV₁% and PEFp% according to GOLD staging criteria, kappa value was 0.32 and staging according to ATS guideline resulted in a kappa value of 0.42. All scores of SGRQ, physical functioning, role-physical, general health, vitality, social functioning, role-emotional and PCS scores of SF 36 and 6MWT were strongly correlated with PEFp% than FEV₁% (p<0.000).

PEF meters can be used for following up in COPD patients diagnosed with spirometry, diagnosing COPD in primary care units which have no spirometry and researching COPD in great field investigations. Especially, "normal PEF value" is very important, since normal PEF values can decrease the need for spirometry.

E4669

The stage of severity, BODE-index and quality of life (QL) at COPD

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The aim: To evaluate association between COPD severity, BODE-index and QL. Methods: BODE-index (B.R.Celli, 2004) was investigated at 138 various COPD severity patients (GOLD 2003). QL was measured using of St. George's Respiratory Questionnaire (SGRQ). The correlation analysis between severity, BODE-index and QL was carried out. The measures QL were analyzed depending on gradation of BODE-index.

Results: The considerable increase BODE-index with enhancing of severity COPD has been shown: 0,14±0,36; 1,97±1,18; 4,38±1,52 and 7,22±1,20 points at I, II, III and IV st, accordingly, p<0,001.

All COPD patients I st (n=21) met to low gradation of BODE-index (0-3 points). Among patients II st (n=36) 32 (88,9%) met to low gradation of BODE-index and 4 (11,1%) to moderate gradation of BODE-index (4-6 points). All patients IV st (n=23) met to high gradation of BODE-index (7-10 points) whereas patients III st (n=58) are differed with BODE-index essentially: 19 (32,8%) met to low gradation; 31 (53,4%) - moderate; 8 (13,8%) - high. With increase BODE-index QL deteriorated p<0,001, accompanying by high correlation of the dependence between the domain "Total" and BODE-index (r=0,82; p<0,05) that is more than association between "Total" and FEV₁, r = (-0,68; p<0,05).

The conclusion: Severe COPD (III st) is characterized with heterogeneity by BODE-index. For an estimation of functional status and QL at COPD the BODE-index is a more informative parameter than traditional division COPD on stages of severity.

E4670

Using different pulmonary function parameters for establishing reversibility in COPD patients

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Objective: For COPD patients, FEV₁ is often used for determining reversibility. But it's thought that in some COPD patients who are not reversible according to FEV₁, parameters like FVC and IC can increase after bronchodilatation and they

can be used for determining the efficacy of the treatment. The aim of this study was to investigate these parameters which are thought to be used for reversibility and the relationship between FEV₁.

Material and Method: 54 stable COPD patients were included in this study. FFT performed before the application of a bronchodilator (200µg salbutamol) and 15 minutes after the application.

Results: Of 54 patients, 19 patients (35.2) were reversible according to FEV₁, 20 (37.0) according to FVC and 21 (38.9) were reversible according to IC. Five patients (9.3) were reversible only according to FEV₁, 4 (7.4) FVC, 4 (7.4) IC. Seven (13) patients were reversible according to all three FFT parameters. In 35 patients, who were not reversible according to FEV₁, 10 (28.5) were reversible according to FVC and 11 (31.4) were reversible according to IC.

Conclusion: Spirometric tests used in COPD are weak indicators for detecting symptomatic and functional bronchodilator response. In our study, although there was no significant association between the change ratios of FEV₁, FVC and IC, we thought that in determining reversibility in COPD patients IC should also be used with conventional spirometric parameters and take place in spirometric report.

E4671

Symptom questionnaire and laboratory findings in COPD patients diagnosed by spirometry in Korea

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Rationale: A population-based national COPD study was conducted in Korea. Analysis of parameters from this epidemiologic study is representative of Korean COPD patients.

Materials and Methods: We evaluated symptom questionnaire and laboratory findings in COPD patients diagnosed by spirometry in conjunction with the 2nd Korean National Health and Nutrition Examination Survey. Total 9,243 adults over the age of 18 were recruited. Among them, 88.8% completed questionnaire and 52.1% (4,816 subjects) performed spirometry.

Results: Prevalence of COPD by spirometry in all ages (>18 years) and older ages (>45 years) were 7.8% and 17.2%, respectively. Among COPD subjects, prevalence of previous diagnosis of COPD or asthma was only 22%. In COPD subjects, symptom of dyspnea on exertion was higher (p=0.034) than normal. Frequency of respiratory symptoms such as cough, sputum and wheezing were significantly higher in COPD patients (p<0.005). Total cholesterol level was higher in COPD (193.6 mg/dl vs. 187.4 mg/dl, P=0.001). Blood urea nitrogen and creatinine were higher in COPD patients, but there was no significant difference in hematocrit level (42.2% vs. 41.6%, p=0.106) and hemoglobin level was lower in COPD subjects (p=0.001). There was no significant difference in laboratory finding according to severity of COPD (GOLD stage). In COPD group, income and educational status were lower than subjects with normal spirometry.

Conclusion: In COPD subjects, prevalence of respiratory symptoms was higher than normal spirometry subjects and the levels of cholesterol, blood urea nitrogen and creatinine were higher. But, hemoglobin level was lower and there was no difference in hematocrit level.

E4672

Predictor factors of mortality in COPD patients

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Objective: The aim of this study was to analyze mortality causes of COPD patients and its associations.

Methods: Prospective analysis of 596 cohort COPD patients followed for three years or until death. Mean age was 66.48 years (SD 9.61 yr.). According to GOLD classification, the patients were GOLD 2: 193 cases (32.7%), GOLD 3: 287 cases (48.1%) and GOLD 4: 114 (19.1%). We only included patients with immunocompetent status at the beginning of the study (not with known hematological disease, neoplasm disease, HIV infection, renal failure, hypogammaglobulinemia or anatomical or functional asplenia). The end point was crude mortality and causes of mortality. Univariate analysis, Kaplan Meier survival curves and multivariate Cox proportional hazard models with covariates were used to evaluate the association between the mortality and different variables.

Results: one hundred-seventeen patients died (19.6%). Mortality was due to respiratory failure 34 (29%), cardiovascular diseases 30 (25.6%), cancer 21 (17.9%) (12 were lung cancer), infections 13 (11%) (12 were pneumonias), gastrointestinal diseases 11 (9.4%), unknown causes 2 (1.7%) and others 6 (5%). According to Cox regression analysis, independent factors related to mortality were: age: RR 1.045 (CI 95% 1.020, 1.070; p<0.001); current smokers: RR: 1.647 (CI 95% 1.071, 2.533; p<0.023); cancer: RR 6.944 (CI 95% 4.387, 10.991; p<0.001); cardiovascular disease RR: 2.623 (CI 95% 1.818, 3.784; p<0.001); severe airflow obstruction (GOLD 4) RR 2.293 (CI 95% 1.547, 3.399; p<0.001); acute exacerbations per year RR: 1.289 (CI 95% 1.173, 1.416; p<0.001).

Conclusion: The main cause of mortality in COPD patients were respiratory disease (respiratory failure, pneumonia and lung neoplasia).



European Respiratory
Society

European Respiratory Journal

ABSTRACTS
16th ERS Annual
Congress

Munich, Germany,
September 2–6, 2006

VOLUME 28 | SUPPLEMENT 50 | SEPTEMBER 2006

www.erj.ersjournals.com