

E4673

## Quality of life (QOL) and clinical phenotypes in COPD

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It is generally believed that, QOL in patients with COPD does not necessarily parallel to indices of airflow limitation. In this study, we evaluated QOL using the St. George's Respiratory Questionnaire (SGRQ) for a large number of patients (n=242) who were recruited for Hokkaido COPD cohort study. The diagnosis of COPD was based upon the diagnostic criteria of GOLD guideline. All the subjects received detailed interviews on clinical symptoms, blood tests, pulmonary function tests including spirometry before and 30 min after inhalation of salbutamol (0.4 mg), and high-resolution computed tomography. The severity of emphysema was visually scored. Stepwise multiple regression analyses were performed using following independent variables: sex, age, the presence of chronic cough and/or chronic phlegm, smoking history, smoking status, baseline FEV<sub>1</sub>, reversibility of airflow limitation, emphysema score, blood eosinophils, and serum IgE. Reversibility of airflow limitation, blood eosinophils, and serum IgE had no influence in any dimensions of SGRQ. Prebronchodilator FEV<sub>1</sub> was the most influential in all dimensions of SGRQ. The presence of chronic cough or phlegm significantly affected symptom (r=0.342), impact (r=0.246), and total (r=0.233) dimensions of SGRQ. In addition, the severity of emphysema independently affected activity (r=0.283) and total (r=0.234) dimensions of SGRQ. In conclusion, the clinical phenotype according to the presence of chronic bronchitis symptoms and the severity of emphysema contribute to overall QOL besides the severity of airflow limitation in COPD.

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## Correlations between SGRQ and other clinical and functional parameters in COPD patients

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**Aim:** comparison between data provided from quality of life questionnaire (SGRQ) and parameters which assess the disease severity; correlations between SGRQ and factors which are involved in development and worsening of the COPD and between SGRQ and pulmonary function parameters were studied.

**Subjects, methods:** SGRQ questionnaires were collected from 61 stable COPD patients, 54 men (88.5%), aged 61.7±9.09. All the patients were submitted to pulmonary function tests: spirometry, plethysmography, alveolo-capillary diffusion test. Other variables assessed were: smoking (no. of packs/year), Body Mass Index (BMI), breathlessness (MRC scale). The total SGRQ score and the separate symptom, activity and impact scores were calculated; the pulmonary parameters were expressed as percentage from predicted values. Statistical data analysis performed with R-2.1.0. included: Spearman correlation coefficient, p-value and linear regression.

**Results:** The total score and the score on activity and impact domains of the SGRQ correlate significantly with RV and D<sub>LCO</sub> (SGRQ<sub>t</sub> vs RV:  $\rho$  0.01,  $r = 0.383$ ; SGRQ<sub>t</sub> vs D<sub>LCO</sub>:  $\rho$  0.007,  $r = -0.430$ ). Symptom SGRQ score correlates with BMI ( $\rho$  0.031,  $r = 0.278$ ). There were no significant correlations between SGRQ (total and partial scores) and FEV<sub>1</sub>, before and post bronchodilator or with smoking history.

**Conclusions:** COPD severity is objectively assessed by functional tests. Our analysis suggests that SGRQ evaluates, in a standardized and quantifiable way, but within large limits, the perception of the patients related to the different consequences of the disease.

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## Effect of airway bacterial load and microbial patterns on dyspnea, exercise performance and health status in patients with stable COPD

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We aimed to investigate the effect of airway bacterial load and microbial patterns on dyspnea, exercise capacity and health status in COPD patients.

35 patients with stable moderate COPD were recruited. Quantitative bacteriologic cultures in bronchoalveolar lavage (BAL), dyspnea scores, with Baseline Dyspnea Index (BDI) and Modified Borg Scale, the 6 minute walk test, and health status with the Saint George's Respiratory Questionnaire (SGRQ, Turkish version) were evaluated.

BAL revealed microorganisms above the established threshold ( $\geq 10^3$  cfu/ml) in 22 (62.8%) of COPD patients. 25.7% had possible pathogen microorganisms (PPMs) and 37.1% non-PPMs. Patients with and without airway colonization were indistinguishable in terms of their age, smoking, body mass index and lung functions. Patients with colonization reported worse BDI ( $p=0.017$ ) and health status than patients without colonization in the following scores: SGRQ symptom ( $p=0.002$ ), activity ( $p=0.001$ ), impact ( $p=0.003$ ) and total ( $p=0.001$ ). 6 minute walk test distance were  $486 \pm 15$  m in colonized patients and  $547 \pm 16$  m in non-colonized

( $p=0.01$ ). There were no significant differences between the patient with PPMs and non-PPMs with regard to dyspnea scores, exercise capacity and health status. Total bacterial load correlated with BDI ( $\rho=0.55$ ,  $p=0.01$ ), and all SGRQ components ( $\rho=0.67$ ,  $p=0.001$  for total score).

In conclusion, stable COPD patients with airway bacterial colonization demonstrated worse dyspnea, exercise capacity and quality of life than patients without colonization. These worse status of the patients are related with the severity of colonization, but not with the microbial patterns.

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## "INSPIRAÇÃO" study: the COPD patients perspective - a self description of COPD in secondary and primary care in Portugal

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The purposes of the study were to evaluate the patients (pts) perspective of COPD and differences in care at secondary (hospital-based pulmonologists- P) and primary care level (general practitioners-GP).

INSPIRAÇÃO was a multicenter, descriptive and cross-sectional study conducted during 2004. About 9000 questionnaires were sent to physicians managing COPD, in Portugal.

The survey was anonymous and answered by pts outside the health care setting.

The sample study consists of 244 completely filled questionnaires:

- 82% male, mean age 64 years, 20% active workers,
- 21% Smokers (S) (47 packs year PY), 57% ex-S (48 PY), 22% never-S,
- 4% underweight, 44% overweight, 14% obese,
- 68% with comorbidities, 29% hypertension, 22% cardiac, 13% diabetes

55% of pts were treated by P and 34% by GP.

41% had COPD for more than 10 years and 14% were diagnosed in the previous year.

86% had lung function tests ever done and 74% had a test done in the last year.

The distribution of severity of dyspnoea assessed by Medical Research Council score (MRC) was: 42% MRC 2-3, 34% MRC 4-5

36% of pts had more than 4 regular visits/year, 87% had regular medication, 49%

used rescue bronchodilators all/almost all days - week, 35% rarely.

The GPs had more female and active workers pts, were more overweight or obese,

more S and never-S, less severe pts (MRC 1, 2 and 3), less regular and more rescue

treated pts (all statistic significant,  $p < 0.05$ )

Despite these GP and P COPD pts differ, the clinical care of COPD in

Portugal by GP and P is fairly similar.

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## "INSPIRAÇÃO" study: a self description of severity, burden and health status in COPD patients in Portugal

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INSPIRAÇÃO was a multicenter, descriptive and cross-sectional study conducted during 2004. About 9000 questionnaires were sent to physicians managing COPD, in Portugal.

We analyzed the perspective of COPD patients (pts) about the severity and burden of their disease and health status.

The survey was anonymous and answered by pts outside the health care setting,

and from the pts willing to answer, 244 pts completely filled the questionnaires:

- 82% male, mean age 64 years, 20% active workers,
- 21% Smokers (S) (47 packs year PY), 57% ex-S (48 PY), 22% never-S.

The distribution of severity of dyspnoea assessed by Medical Research Council score (MRC) was: 42% MRC 2-3, 34% MRC 4-5

51% pts self classified the severity of COPD as moderate and 34% as very severe.

Despite 49% pts used rescue bronchodilator all/almost all days, they classified the

control of COPD as good (45%) or medium (49%).

35% had activity limitations all/almost all days-week (32% some days), 69% on

stair climbing and 44% on walking.

78% had moderate/severe exacerbations in last year (33%  $\geq 3$  exacerbations), in

66% lasting  $> 4$  d.

In the previous year, 52% had medical emergency visits and 30% admissions

(mean 1,7 admission year, median 14 days). But only 20% reported poor health

status (68% regular).

Of the 24% active workers pts, 41% of them had lost working days (median 15

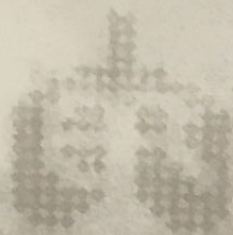
days).

We found good correlation between dyspnoea severity, self-assessed severity of

disease (not health status) and emergency visits/admissions, but only 6% of pts

reported bad control while 30% were admitted to hospital.

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