was 96.2%. AS was determined by a positive response to any of: have you 1) been woken by an attack of shortness of breath at any time (2) had an attack of asthma 3) are you currently taking any medicine for asthma 4) had wheezing or whistling in your chest when you did not have a cold. R was determined by positive response to do you have any nasal allergies including hay fever. Symptoms prevalence was 35.3% in asthma and 3.2% in chronic bronchitis. The majority of subjects (94.7%) had not had any exacerbation in the last 3 months. In asthma 6.8%, asthma medication 0.9%, nasal allergies 20.5%. Overall AS prevalence was 22.6% in the study population. This symptomatic group is currently undergoing the second stage of the study involving a detailed questionnaire, spirometry and allergy testing. This study was supported by ASTRA and Society for Pulmonary Diseases.

P217
Comorbidity in Asthma and COPD in Dutch General Practice
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Aim of the study. To describe comorbidity in asthmatic and COPD-patients in Dutch general practice.

Patients and methods. Secondary analysis of data from the Dutch National Survey of General Practice (1997-88), covering 161 Dutch GPs with a total list size of 350,000 patients. Comorbidity was defined as diseases or problems, that according to the GP, had a direct relation to the reason for encounter or the diagnosis.

Comorbidity was registered as underlying diseases in the National Survey. Results. GPs registered 3351 episodes of asthma (n = 1276) and COPD (n = 2075) in patients 12 years and older. In these 3351 episodes 713 (21.3%) patients were scored by a vitalograph and an observer. Educational seminars of six sessions was also attended by the patients. Educational seminars of six sessions was also attended by the patients.

In 10 general practices, a large sample (n = 1155) of the open adult population has been screened for (early) signs of asthma/COPD. Non steroid-dependent subjects over 65 yrs (occasional report in 26.7 to 46.7%), although a confounding effect of cardiovascular diseases may be important. These data confirm that NA is “a manifestation of more severe inflammation in the airways of subjects with asthma” (Oosterhoff et al., 1995) and as such it recurs in a percentage of patients much lower than previously estimated.

P220
Single Breath Transfer Factor for Carbon Monoxide in Patients with Bronchial Asthma and COPD of a Norwegian Community Sample
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Limited community based data is available on the distribution of transfer factor variables in healthy and diseased subjects in Northern Europe. In a cross sectional survey of a Norwegian general population sample of 1275 subjects aged 18-73 years examination with single breath transfer factor for carbon monoxide (TLCO) was performed. The subjects also were diagnosed as having bronchial asthma or chronic obstructive lung disease (COLD) based on a clinical and spirometric examination (Thornx 1991:686-70). The prevalences of bronchial asthma and COLD in this population were 2.4% and 5.4%, respectively. Reference values for TLCO were estimated from never-smoking subjects of the present sample without respiratory symptoms or disorders (Thorax 1992:47:167-73). When these reference values were applied on the entire sample mean (SD) TLCO in percent predicted (TLCOS) was 97% (13%) in men and 106% (15%) in women. Corresponding figures in patients with COLD were 82% (25%) in men and 90% (19%) in women, while in subjects with neither of the disorders the figures were 101% (15%) and 102% (14%). In conclusion, in this Norwegian community sample patients with COLD had reduced values of TLCO, while patients with bronchial asthma had normal values of TLCO. For both asthmatics and COLD patients men tended to have lower values of TLCO than women.

P221
The Importance of Asthma Education in Patients with Asthma

Despite recent developments in the diagnosis and treatment of asthma, there seems to be a rise in morbidity and mortality related to inadequate education of patients lacking necessary information about the disease. This study sought to evaluate patients’ information about their disease and their meteorerease in the local health care system; however, there may be a gross overestimation: in fact available prevalence data do not reflect the general population of asthmatics, as 75% of GPs), gave a positive response to questions on frequent occurrence of breathlessness or chest tightness at wake-up in the morning. Occasional occurrence of the cited symptoms was recorded in 16.7 to 23.3% of asthmatics and in 2.3 to 4.9% of GPS. These rates increased in subjects aged over 65 yrs (occasional report in 26.7 to 46.7%), although a confounding effect of cardiovascular diseases may be important. These data confirm that NA is “a manifestation of more severe inflammation in the airways of subjects with asthma” (Oosterhoff et al., 1995) and as such it recurs in a percentage of patients much lower than previously estimated.

P222
Detection of Adult Asthma/COPD in General Practice
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In general practices, a large sample (n = 1155) of the open adult population has been screened for (early) signs of asthma/COPD. Non steroid-dependent subjects with ages between 25 and 70 were included. Screening consisted of lung function tests including FEV1 (BC), VC and reversibility after 0.5 mg salbutamol) and a Dutch version of the MRC questionnaire. A mildly impaired lung function, the presence of wheeze was 0.9% of the population as estimated by doctor’s diagnosis and/or symptoms in the last 12 months, carried out on a general population sample (GPS: n = 1100), randomly selected in a rural area of northern Sicily. To questions on frequent awakenings due to dyspnea or cough, a positive response was recorded respectively in 10 and 15% of asthmatics, as compared to 1.0 and 1.5% of GPS. Similarly 9 and 8.3% of asthmatics (0.9 and 1.6% of GPS), gave a positive response to questions on frequent occurrence of breathlessness or chest tightness at wake-up in the morning.
Cystic Fibrosis (CF) is the commonest lethal recessive autosomal disease among Caucasian populations. The frequency of CF and CFTR gene mutations (especially of ΔF508 deletion) is variable in different countries. During last two years, the frequency of CF in Russian population has been studied. We found that CF α1 in 12,000 newborns. The major ΔF508 mutation was found in 58% chromosomes of CF patients in Moscow. The most common mutations in Russian population were identical to those studied in Europe. N1303K, 2143delT, 2I84insA, G542X, W1282X, 3732<

CFTR — Prevalence, diagnostic features and respiratory involvement in clinical care of cystic fibrosis

P2207

Epidemiology of Cystic Fibrosis in Russia


Department of Cystic Fibrosis, Institute of Clinical Genetics, R. University

Cystic Fibrosis (CF) is the commonest lethal recessive autosomal disease among Caucasian populations. The frequency of CF and CFTR gene mutations (especially of ΔF508 deletion) is variable in different countries. During last two years, the frequency of CF in Russian population has been studied. We found that CF α1 in 12,000 newborns. The major ΔF508 mutation was found in 58% chromosomes of CF patients in Moscow. The most common mutations in Russian population were identical to those studied in Europe. N1303K, 2143delT, 2I84insA, G542X, W1282X, 3732<