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Evaluation of the influence of smoking on bronchial patency disorders of Gerontius Yakutsk

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Keywords: spirometry, smoking, elderly age, the urban population, Yakutia.

Introduction. Timely and correct diagnosis of chronic bronchitis requires use of functional verification methods of diagnosis - study of respiratory function. Interpretation of clinical presentation and diagnosis depends largely on spirometric indices [1]. Spirometry is the simplest and safest for the patient study. Basic functional test for the detection of bronchial obstruction - a well-played in the dynamics of forced expiratory volume in first second (FEV1) [4]. .

At present, spirometry is used both for diagnosis of obstructive disease and for monitoring the performance of their severity. Decline in forced vital capacity (FVC) and forced expiratory volume in first second (FEV1) were independent predictors of morbidity and mortality in the elderly [3].

In elderly and old age is common fact of a long and rather intense smoking for life, which in combination with age morphological and functional changes in the bronchopulmonary system contributes to development and severe course of disease progression with complications that determine its outcome [2].

The purpose and objectives: to study the incidence and assess the impact of smoking on the severity of violations of FEV1 in Gerontius Yakutsk, depending on ethnicity.

Materials and methods. The object of the study was the population of Yakutsk in the 60 years of age or older. To evaluate the spirometry study used a sample population of persons aged 60 years or older on the basis of electoral lists Yakutsk method of random numbers using a computer program. The database pulmonologist were included 556 respondents. .

Before attending pulmonologist respondents consulted a doctor and manager in the absence of contraindications were sent to spirometry. Respondents with unstable hemodynamics, the presence of severe concomitant diseases, in order to eliminate unreliable data, spirometry was performed. Investigated the most important of the spirometric parameters - FEV1 in Gerontius Yakutsk, depending on ethnicity. Spirometry was performed in a manner consistent with published standards [1, 5]. Investigation of respiratory function was conducted by trained specialists, doctors in the study of functional status at the Republican Hospital № 3 (Yakutia) spirometry "Spirosift SP-5000 with peak flow meter (Japan), with regular calibration. Spirometer produce results on paper.

Total spirometric examination conducted in 180 respondents aged 60 to 89 years, which accounted for 32,3% of the total number participating in the survey, including 29,8% (77)

Indigenous and 34,6% (103) non-indigenous persons.

According to ethnicity has identified 2 groups of examinees: Indigenous people by smoking status of the respondents were divided into never-smokers, smokers present and former smokers.

Results of the study. Total violations FEV1 varying degrees of severity were found in 82,8% of respondents aged 60 and older. According to the severity of violations of FEV1 (GOLD, 2006) of the respondents were divided into 4 groups: no change (normal levels) - $FEV1 \geq 80\%$, moderate violations - $FEV1 = 50-79\%$; severe disorders - $FEV1 = 30-49\%$ and extremely severe violations - $FEV1 \leq 30\%$.

The analysis of the severity of violations of FEV1 in patients 60 years and over by ethnic origin (Fig. 1).

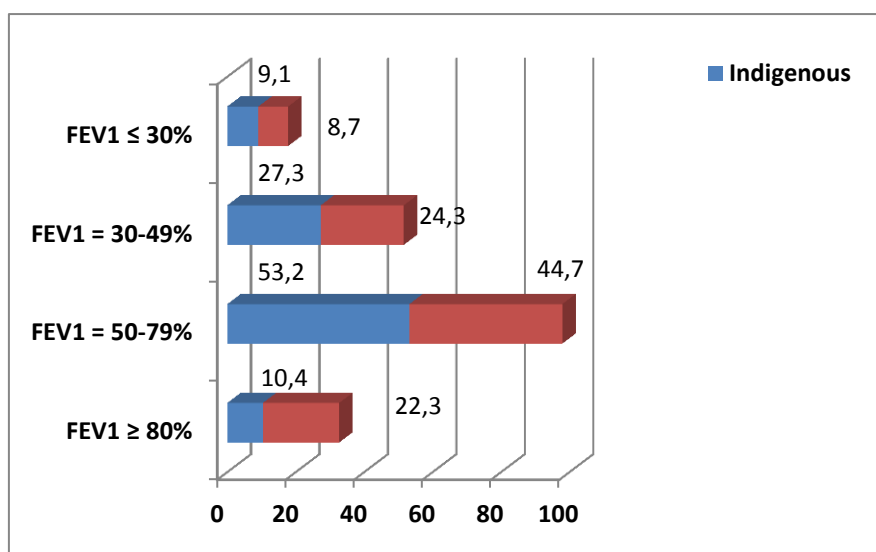


Fig. 1. Severity of violations of FEV1 in patients 60 years and over by ethnic origin.

From figure 1 that the normal indicators of FEV 1 ($\geq 80\%$) is almost 2 times more likely (22,3%) were registered in non-indigenous representatives of the elderly (the root - 10,4%) ($p = 0,037$; $t = 2,099$). Moderate impairment ($FEV1 = 50-79\%$) - were more common among indigenous Gerontius - 53,2% (44,7% for non-indigenous). Severe violations of bronchial obstruction ($FEV1 = 30-49\%$) - almost equally often registered as the indigenous (27,3%), and among non-indigenous (24,3%). Extremely severe impairment ($FEV 1 \leq 30\%$) of Indigenous respondents were 9,1%, while non-indigenous - 8,7%.

Of the 180 respondents, aged 60 years since the study of respiratory function 66.7% of respondents had never smoked, 17,2% - were former smokers and 16,1% - have continued to smoke at the time of the survey.

Bronchial obstruction of varying severity were recorded in 77,5% of respondents never smoked, 90,3% former smokers and 89,7% continued to smoke.

No significant differences between the studied ethnic groups in the frequency of violations of FEV1 as a function of smoking status is not revealed, although slightly more violations of FEV1 detected among the indigenous population. More severe violations of bronchial obstruction were observed among former and current smokers. In this case, significant differences were obtained in cases of severe bronchial obstruction, which is 3 times more prevalent in the group of former smokers among non-indigenous population.

Conclusions. In 82,8% of persons 60 and older registered with a high frequency of bronchial obstruction of varying severity. Normal indices FEV 1 ($\geq 80\%$) almost 2-fold significantly more often (22,3%) were registered in non-indigenous residents of Yakutsk.

The changes revealed bronchial obstruction among former and current smokers argue that smoking is a major exogenous risk factors and in conjunction with the influence of meteorological factors (low temperature swings, humidity and barometric pressure during the day) reduces the functional reserves of the organism, which is manifested in a decrease with age, speed and volume characteristics of the respiratory system.

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THE INTEGRATION APPROACH A LOT OF STUDY OF THE DYNAMICS OF MORBIDITY BY INFECTIONS WITH HAEMOCONTACT MECHANISM OF TRANSFER (HIV, HEPATITIS B AND C) OF THE SAKHA REPUBLIC (YAKUTIA) AND EPIDEMIOLOGICAL ESTIMATION OF FACTORS ITS DETERMINING.

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A conjugate retrospective analysis a lot of study of the dynamics in HIV, hepatitis B and C morbidity in the Republic of Sakha (Yakutia) having the general (haemocontact) mechanism of transfer in comparison with the determinants that are presumably able to affect its pattern. The leading significance of antiepidemic measures in health facilities and current trends in the prevalence of drug addiction in the population is shown. The difference in the mechanism of formation above infections disease in Yakutia as compared to other regions of Russia.

Key words: HIV, hepatitis B and C, epidemic process, risk factors.

Introduction.

The actual of a problem of infections with the haemocontact mechanism of transfer is caused by set of social, economic and epidemiological indicators [5,7,9,13]. In Far East Federal district one of the highest levels of prevalence parenteral virus hepatitis and HIV the Russian Federation [5,4,8].