relative risk increase is observed in Blagoveschensk-1.22 ± 0.7 (x2 = 34.21), Zavitinsky area-1.33 ± 0.32 (x2 = 9.0); There is an upward trend in Svobodnensky area of -1.1 ± 0.46 (x2 = 3.0). Statistically significant decrease in relative risk was observed in Blagoveshchensk district-0.75 ± 0.18 (x2 = 5.24) Konstantinovsky district-0.68 ± 0.15 (x2 = 6.59), Mikhailovsky area -0.76 ± 0.18 (x2 = 4.25), Oktyabrsky district-0.69 ± 0.17 (x2 = 8.64), Tambovsky area is 0.79 ± 0.22 (x2 = 4.87). in General, the area during the monitoring period, the risk of incidence of breast cancer, relative to the region of Siberia and the far East, amounted to 0.97 ± 0.28 (x2 = 3.12), i.e. statistically not significant: Amur region is not allocated to morbidity among other territories in the region.

Conclusion: spatial patterns of distribution of breast cancer among the population of the Amur region have territorial specificity through the climatic factors. Morbidity of the population of the North region is characterized by an unfavorable trend, but statistically Amur region is not allocated to morbidity among other territories in the region.

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THE TEMPORAL ASPECT OF BREAST CANCER MORBIDITY IN FEMALE POPULATION IN A GIVEN REGION ON THE EXAMPLE OF THE AMUR REGION

Korobkova T.N.

Amur State Medical Academy, Blagoveshchensk, Russia

Abstract Breast cancer refers to diseases, occupying a leading position in the structure of morbidity, disability and mortality of the female population, causing great damage to the reproductive potential of the country as a whole, and the region. The incidence of breast cancer in the last 5 years has a strong tendency to growth, while maintaining the highest levels of growth. It is known that in Russia in 2013, the absolute number with the first ever diagnosed breast cancer among women amounted to 60717.

"Rough figure" JSC on 2013, totaled 82.75 at 100 thousand. Female population, standardized metric 52.52 ± 2.9 (in the Russian Federation "rough" RF indicator on 2013, totaled 78.8, standardized metric 47.05 ± 0.2). By DFO "rough" value on 2013, totaled 77.45 at 100 thousand female population, standardized metric 49.13 ± 1.01. In breast cancer morbidity in female population of JSC is also characterized by steady growth, which suggests an unfavourable epidemiological trends. Stably high rates reflect the continuing effects of risk factors on the population living in the region.

Key words: breast cancer, female population, morbidity, Amur region.

The purpose of the work: learn the basic temporary incidence rates of breast cancer in the Amur region during the period from 1999 to 2013 biennium with an analysis of their features.

Materials and methods. Inform the work served as a database of Amur Oncology Center , formed on the basis of official data, accounting and reporting of medical records for the period 1999-2013 biennium. In the context of the work of the incidence of this pathology was estimated as the total for 15 years, and three five-year periods: 1999-2003, 2004-2008, 2009-2013 biennium. The object of the study was each case of breast cancer, registered in the Amur region. Statistical estimation and calculation methods obtained data were carried out on the basis of modern methods of calculation.

Results and discussion. Analyzing the figures, you can see their steady growth. So, during the monitoring

period, in the Amur region, taken on 3926 records women diagnosed for breast cancer. In view of the fact that at the beginning of the study, the absolute number of patients with breast cancer was 226 people (1999), and in the final (2013)-336 people on 32.7% more, we can assume a true increase in incidence.

The analysis of the structure of morbidity for 15 years (1999-2013) with the average unit weight and rank places noted that all administrative territories region breast cancer holds 1-St place in the structure of morbidity in female population and 2-3-rd place in the overall structure of morbidity after lung cancer and skin tumors. For the first time in the history of of Amur Oncology Center in 2013 breast cancer came in first place in the overall structure of morbidity, reflecting global trends. For five-year periods studied notable structural changes the ranking of major locations have been identified, and breast cancer in time held leading first place, making a decisive contribution to the oncological morbidity. The figures have changed little: 20.03%, 20.69% , 21.73% respectively the first, second, third five year observation periods. Thus, almost one in five identified malignant tumors in women is exactly in the mammary gland.

When analyzing structural priority position frequency (over 20%) among all tumors breast cancer refers to a group of frequent. While taking into account gender differences in frequency of occurrence, the breast cancer also takes priority structural location and belongs to the so-called «extremely frequent tumor».

Been identified and analysed the incidence (specific gravity) of breast cancer in different age groups. The incidence of breast cancer before the age of 30 is sufficiently low, due to the fact that in this age period is dominated by mostly tumor of hematopoietic and lymphoid tissues, solid non origin (embryonic). Considering that this process of multi-stage carcinogenesis and carcinoma of breast formation, like any "adult" type of tumors requires a long enough exposure on the body of certain risk factors, and therefore the likelihood of breast cancer increases with age.

The obtained numerical values specific gravity of breast cancer among other NDA for women in different age periods shows a high share in the 30-39 age periods, 50-59, 60-69 years. During the monitored period in JC, there have been no cases of breast cancer before the age of 20. This confirms the fact that breast cancer is extremely rare (almost casuistic) tumor in childhood. Draws the attention of the maximum specific gravity of breast cancer in the late reproductive and pre menopause periods (40-49 years), when every 3-4 tumor is located precisely in the mammary gland, which is 31.8% and 30.99% respectively. At an older age (70-75 years of age and older), the proportion of breast cancer morbidity is declining, owing to the increasing frequency of tumors extragenital organs (stomach cancer, lung, skin, rectum and colon). Comparing these data with employers for 2013, one can observe the same situation where the proportion of breast cancer among all women was highest tumors: 30.62% and 32.05% respectively for groups of 40-44 and 45-45 years.In addition to extensive morbidity study of breast cancer to determine the quantitative characteristics of this pathology performed a comparative analysis of the dynamics of average intensive and standardized indicators for five-year periods: changes characterized by a gradual increase in standardized and intense figure, having maximum values in (III) five-year plan (46.84 ± 1.32 and 71.10 ± 3.63 respectively). In the Russian Federation annalogical, 2013 indicators amounted to 47.05 ± 0.2 and 78.8 ± 0.2, and by DFO 52.52 ± 2.90 and 82.75 ± 2.90 respectively. In the RF in 2013 high "gross" figures were observed in the following age group: 45-49 years-102.94 on 100 thousand population; 50-54 years-123.77 on 100 thousand population; 55-59-154.42 on 100 thousand population; 60-64 years on 100 thousand 189.57 population; 65-69 years-217.65 on 100 thousand population (maximum level); 70-74 years-185.26 on 100 thousand population; 75-79 years-183.05 on 100 thousand population; 80-84 years-132.51 on 100 thousand population; 85 and older, to 117.19 100 thousand population. So indicators on AO slightly below the Russian.

The rate of growth or shrinkage of morbidity in the region differed a great variability within age groups and in different periods of observation. You can watch 3-4 peak of tempo of growth and 2 peak pace of decline in incidence, as would be shifted in time relative to each other for a period of five years. Analyzing the situation, it can be assumed that approximately at the same time for different age groups (in which there has been a significant increase in morbidity) could operate a diverse a number of risk factors, leading to the dysfunction of regulatory systems (nervous, endocrine, immune to a certain extent). One manifestation of this disregulatical complex and could be an increase in the frequency of breast cancer, as malignant neoplasms of hormone dependent tissue. This significant increase in the incidence in different reproductive status groups (25-39 years-active reproductive and postmenopausal periods) may to testify in favor of common mechanisms of carcinogenesis in these groups and or possible special "vulnerability" for the development of breast tumors.

Thus, in the period from (I) on (II) five years is the maximum growth rate of morbidity was observed in the age between 30-34 years-39.9%, next: 65-69 years-31.5%. during the second period of monitoring (II) (III) five-year plan, the maximum growth rate registered in the 25-29 years, 44.9% (and that's the highest rate for the whole period under consideration), then: 35-39 years 31.5%, 55-59-22.5%, 70-74-28, 6%. in assessing levels of growth by age group in the period I to III five years can be observed more moderate more "smooth" curves upgrades. So, the highest levels recorded in the age group 30-34 years-23%, 65-69 years-22, 05%. The greatest decline was observed in the tempo from II to III five years aged 20-24 years and was 50.8%. During the same period, the rate of decline also recorded observation in the 40-44 year-9.9%. Between (I) (II) five highest

rates of attrition observed in the age group 25-29 years-14%, 35-39 years-8, 2%. When studying the whole monitoring period (I to III five years) to change the pace of attrition is detected only in one period -20 -24 years (31%) have not been found credible the dynamics of growth of morbidity in women 45-49 years, identical for all observation periods. This period is like an inflection point, after which all age periods only increase morbidity. So, revealed heterogeneity in growth rates and attrition in different age periods, which can be explained by the existence of different background of pretumorous hyperplastic processes of reproductive system of different length in time and molecular genetic and others mechanisms of tumor growth. The dynamics of the incidence of breast cancer by age in AO had the opportunity to trace the three five-year periods. Thus, the growth of morbidity is observed with age 30-34 years, remains quite high in age 50-59 periods, 65-69 years, reaching its maximum in the 60-64 years in all. Starting with the 70-74 age group, there is a decrease in the incidence of breast cancer, which can be attributed to the demographic characteristics of the region (life expectancy).

When comparing the incidence of breast cancer by five-year periods of observation, one can observe a slight decline in incidence in the age group 20-24, the first and the third five-year plans with $1.05 ± 2.9 ± 0.01$ to 1.36 (99%) on the fans. population and age group 45-49 years from $106.64 ± 14.93$ to $102.97 ± 3.4\%$) (15.34 on 100 thousand. the population in the analogical period. On the contrary, increase in time mentioned in virtually all age periods, however, the greatest concern is the significant increase in the incidence in postmenopausal women and postmenopausal periods later: 55-59 years from $123.05 ± 24.73$ up $162.76 ± 18.64$ (24.4%); 60-64 years with $144.19 ± 21.48$ to $189.11 ± 23.92$ (23.7%); 65-69 years from $126.78 ± 23.26$ up $188.86 ± 29.93$ (32.9%); 70-74 years from $129.38 ± 26.01$ to $180.81 ± 25.31$ (28.4%), and over 75 $101.18 ± 21.50$ till $139.97 ± 27.7$ (20.86%) from first to third five-year plan. For determining the quality characteristics of the incidence of breast cancer has been studied, the average age of the patients and the median incidence. Found that for 15 years there has been an increase in the average age of sick women in time: 56.7 years, $0.9 ± 0.69$ years in 1999-2003. up to $57.6 ± 0.64$ years 2004-2008 Gg. (not statistically significant); at 1.3 years, with $57.6 ± 0.64$ in 2004-2008 Gg. to $58.9 ± 0.5$ in 2008-2013 biennium (statistically significant), $< p\ 0.05$. The greatest increases in the median age of cases of breast cancer occurred 2.2 year, $56.7 ± 0.69$ years to $58.9 ± 0.5$ in 2008-2013, when $< p\ 0.05$. By comparing the data obtained with employers for 2013 (61.2 years), we can note a younger age in patients with breast cancer in region, that is associated with the demographic characteristics of the region, characterized by a high level of mortality, a younger average age, high migration.

Another quality marker characteristics of tumor-median incidence also increased during the monitoring period in time: from 55.34 years (I) five-year plan (1999-2003), 56.9 years (II) five years (2004-2008) and up to 58.8 years (III) five years (2009-2013)-3.4 years from (I) on (III) five years. The observation period (1999-2013 biennium) the median rate of morbidity amounted to 57.6 years. Thus, in JSC trend increase in the average age of the patients and the median incidence of breast cancer. In the study of the dynamics of morbidity study intensive growth component indicators. Slavery and steady picture of significant predominance (II) components (more than in 2 times), i.e., the risk of getting sick, attested to the continuing effects of Exo-and Endo-genetic factors on the female body, the occurrence of breast cancer as a typical tumor proliferative reaction in response to this analysis component target region showed that the incidence of growth depends to a large extent from the risk of getting sick than age, that same situation in the whole of Russia and DFO. Maximum level (II) growth components (risk of getting sick)-21.8% was observed in the observation period with the (I) on (III) five-year plan (1999-2003 for 2008-2014), which amounted to 11.35 on 100 thousand population. Continuing negative trend associated with the risk of falling ill, most likely due to the possible emergence of new and intensification of existing risk factors for breast cancer in the territory.

Given that breast cancer refers to tumors in which there has been a significant magnitude (amplitude) indicators in selected age intervals variability analysis was carried out to obtain the generalized characteristics of age differences. It was found that in larger age variability of the spread of brest cancer to ao there are more significant differences in risk factors. So, by studying the variability of age-related indicators for the whole period of study from 1999 to 2013 on JSC as a whole, there is an undulating pattern of change. So, the maximum level is observed in 20-24, 2011-64.4%, indicating a vast impact on the incidence of brest cancer in this age of exogenous risk factors. Significant role of external Wednesday exerts its negative impact on women of reproductive age are active-25-29 years-32.7%; 30-34 years-22.5%. With 30-35 years variability decreases, reaching minimum values in the 45-49 years-11.1%, associated apparently with overwhelming influence of endogenous (hormonal) factors. Total variability equal to 66.7%, r (correlation) =-.63%, p = 0.03 (p < 0.05) is statistically significant.

Conclusion. Thus, it can be assumed, throughout a woman's life, in different periods of its reproductive function has a different contribution of exogenous and endogenous risk factors in the development of breast cancer.

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CIRCADIAN RHYTHMS OF THE RESPIRATORY SYSTEM IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE, DEPENDING ON THE SEVERITY OF THE DISEASE

Kostrova I.V., Prikhodko O.B.

Amur State Medical Academy, Blagoveshchensk, Russia

Abstract Organization of time of external respiration function in patients with chronic obstructive pulmonary disease was studied. According to the analysis of individual parameters of circadian rhythms of the respiratory function in patients with COPD it was found that in the process of increasing the severity of the disease weight of persons with daytime biorhythm was decreasing, and the number of patients with the eveningtime and then also with the morningtime biorhythm of the respiratory system were increasing as well.

Key words: chronic obstructive pulmonary disease, the circadian rhythms of breathing.

Chronic obstructive pulmonary disease (COPD), hypertension, coronary heart disease and diabetes constitute the leading group of chronic diseases – which accounts over 30% of all forms of human pathology, COPD is a global world public health problem. According to the data of various researchers, this disease affects from 4-6% to 10-25% of the adult population and it is characterized by the prevalence of sustained growth in both developed and developing countries [1, 2, 4, 5].

The aim of the work was to study the condition of the circadian rhythms of the respiratory system in COPD patients depending on the severity of the disease.

Materials and methods. Due to the tasks 104 COPD patients aged from 44 to 67 years with disease duration from 1 year to 10 years were selected. Depending on the severity of the disease, patients were divided into groups. Group I included 17 patients with mild disease severity. II Group of patients consisted of 29 patients with moderately severe COPD severity. Group III consisted of 29 patients with severe COPD. IV group included 11 patients with critical COPD severity. Control group included 15 healthy persons - 9 men and 6 women, whose average age was 53,1 ± 2,76, with no clinical signs of acute or chronic diseases of the respiratory tract and without any respiratory diseases in their history.

External respiration function was assessed using «Fucuda» spirometer (Japan) 4 times a day (at 06.00, 12.00, 18.00 and 24.00) for two days in a row. We analyzed the following parameters of respiratory function: vital capacity (VC), forced vital capacity (FVC), forced expiratory volume in 1 second (FEV1), the ratio of FEV1 and FVC in percentage, the peak expiratory flow (PEF), the maximum expiratory flow at the level of 75%, 50% and 25% of forced vital capacity (MEF75, MEF50, MEF25 respectively). All figures were calculated automatically according to the anthropological data, ambient temperature, were reflected on the screen and recorded by means of the printing device. During the evaluation of the main spirographic indicators (VC, FVC, FEV1, FEV / VC %) and indicators of the graph of the flow of forced expiratory (PEF MEF25-75) the proper values were considered.

Statistical analysis was performed by means of kosinor analysis to estimate the parameters of circadian rhythms of biomedical parameters (F.Halberg, 1969), Statistica software v. 6.0. (StatSoft Inc., 1984-2001).

Minimum passabilityof the large bronchi was recorded at 6.00 and 18.00, medium size bronchi - at 6.00 and small - at 12.00. Acrophase of patency of large and medium bronchi observed during daytime hours, and small - in the evening.

Results and discussion. In 80% of healthy subjects the largest volumes of FEV1, PEF recorded during the daytime, and the lowest - in the morning. VC, FVC were maximum in the daytime and minimum during the