concentrations for ARFC acute inhalation exposures outlined in Appendix 2 of the Manual [12], depending on the duration of exposure.

Report on Era-Risks software calculation: it would be advisable to make up in accordance with the classical procedure for risk assessment performance, which includes 4 stages:

- 1. Identification of emissions hazard from a designed enterprise.
- 2. Assessment of the ‘dose-response’ relationship: identification of quantitative relationships between exposure levels and health indices (MR, 2004).
- 3. Impact (exposure) assessment of chemical substances on human health.
- 4. Risk profile.

Recommendations.

Assessment of public health risk when determining the SPZ size, including the software calculations, is based mainly on Manual 2.1.10.1920-04. However, this document is extremely insufficient to address this problem. It shall be required to develop a more specific and substantiated regulatory and methodological document, on the basis of which it is needed to improve the software .

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3. Order of Chairperson - Chief State Sanitary Doctor of the Republic of Kazakhstan No. 71 of September 13, 2006 ‘On approval of a unified methodology for all organizations entitled to conduct a risk assessment, and the Rules to conduct a risk assessment’ – INVALID.
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8. GOST 31295.1- 2005 SOUND/Noise. Sound attenuation during distribution at site. Part 1. Calculation of sound absorption by the atmosphere
9. Oder of the Republic of Kazakhstan Ministry of Environmental Protection No. 221 dated June 12, 2014. Concerning approval of certain methodological documents in the field of environmental protection.
10. Risk assessment procedure to public health from environmental pollution, approved by Order of the Minister of Environmental Protection No. 139-p dated 06.06.2008. INVALID.
11. Procedure for determining the size of the sanitary protection zone for production, processing and refining complexes of the oil and gas industry - approved by Order of Chairperson of the Committee for the State Sanitary and Epidemiological Surveillance of the Republic of Kazakhstan No. 265 dated October 15, 2010.
12. Manual to assess public health risk from chemical substances impact polluting the environment. Manual 2.1.10.1920-04 - Approved by G.G. ONISHCHENKO, Chief State Sanitary Doctor of the Russian Federation, First Deputy Minister of Public Health of the Russian Federation as of March 05, 2004.

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To the issue of glaucoma incidence in the population of Baku city

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Abstract

The observation was carried out on the basis of outpatient clinics of Yasamal district of Baku. Complete coverage information was collected on all cases of glaucoma for the 2016

calendar year (1896 patients). According to ICD-10, patients were divided into 3 groups: diagnosed with primary open-angle glaucoma (1506), primary closed-angle glaucoma (203) and other forms of glaucoma (187). Patients were grouped by stages of glaucoma in accordance with the National guidelines of Russia: the first stage – 433, the second stage 875, the third stage – 377, and the fourth stage 211 patients. The overall incidence of glaucoma at the age of 40 years and older was $22.52 \pm 0.51\%$. The lowest level of overall morbidity was observed at the age of 40-49 years ($7.84 \pm 0.51\%$). In comparison with this age group in the age group of 50-59 years, the incidence rate ($P < 0.01$) was significantly higher – more than 2 times ($17.08 \pm 0.74\%$). In the age group of 60-69 years, the level of glaucoma General morbidity significantly exceeded that in the age groups of 40-49 and 50-59 years ($P < 0.01$), and was $40.06 \pm 1.63\%$.

Thus, the overall incidence of glaucoma in the population aged 40 years and older ($22.52 \pm 0.51\%$) in Baku is close to the European average. Primary open-angle glaucoma ($79.4 \pm 0.9\%$) prevails in the structure of the overall incidence of glaucoma in the population of Baku, the share of pathology in the III and IV stages is 19.9 ± 0.9 and $11.1 \pm 0.7\%$.

Key words: open-angle glaucoma, closed-angle glaucoma, primary glaucoma, the overall incidence of glaucoma

Аннотация

Наблюдение проводилось на базе амбулаторно-поликлинических учреждений Ясамальского района города Баку. Сплошным охватом была собрана информация о всех случаях глаукомы за 2016 календарный год (1896 пациента). В соответствии с МКБ-10 пациенты были распределены на 3 группы: с диагнозом первичная открытоугольная глаукома (1506), первичная закрытоугольная глаукома (203) и другие формы глаукомы (187). Пациенты были группированы по стадиям глаукомы в соответствии с Национальным руководством России: первая стадия – 433, вторая стадия – 875, третья стадия – 377, и четвертая стадия – 211 пациента. Уровень общей заболеваемости глаукомой в возрасте 40 лет и старше составлял $22,52 \pm 0,51\%$. Наименьший уровень общей заболеваемости отмечался в возрасте 40-49 лет ($7,84 \pm 0,51\%$). По сравнению с этой возрастной группой в возрастной группе 50-59 лет уровень заболеваемости ($P < 0,01$) был существенно выше – более чем в 2 раза ($17,08 \pm 0,74\%$). В возрастной группе 60-69 лет уровень общей заболеваемости глаукомой значительно превышал таковой в возрастных группах 40-49 и 50-59 лет ($P < 0,01$), и составлял $40,06 \pm 1,63\%$.

Таким образом, уровень общей заболеваемости глаукомой населения в возрасте 40 лет и старше ($22,52 \pm 0,51\%$) в городе Баку близок к среднему Европейскому показателю. В структуре общей заболеваемости глаукомой населения города Баку преобладает первичная открытоугольная глаукома ($79,4 \pm 0,9\%$), доля патологии в III и IV стадиях составляет $19,9 \pm 0,9$ и $11,1 \pm 0,7\%$.

Ключевые слова: открытоугольная глаукома, закрытоугольная глаукома, первичная глаукома, общая заболеваемость глаукомой

Glaucoma is common in the urban population (1.5 times more than in the rural population) and in men (1.36 times more than in women). At the age of 70 years and older, glaucoma is detected 10 times more often compared to the age of 40 – 49 years [1]. According to English researchers, the proportion of people aged 40 and older with glaucoma and ocular hypertension increased from 28% in 2008 to 31% in 2012 [2]. Different age dynamics of glaucoma prevalence among men was revealed in Shanghai (2.43; 4.36; 3.91 and 1.85% aged 50 – 59, 60 – 69, 70 – 79, 80 women (1.64; 1.96; 4.30 and 4.82%, respectively) [3]. The total incidence of glaucoma in Russia was 0.1% aged 40-49, 2.8% aged 60-69, 14.3% aged 80 years and older [4].

Purpose. Analysis of the level of General glaucoma morbidity in the city of Baku.

Materials and methods. The observation was carried out on the basis of outpatient clinics of Yasamal district of Baku with a population of more than 230 thousand people. Information on all cases of glaucoma -1896 patients was collected by the method of continuous coverage. According to ICD-10, patients were divided into 3 groups: with the diagnosis of "primary open-angle glaucoma" (1506), "primary closed-angle glaucoma" (203) and other forms of glaucoma (187). Patients were grouped by stages of glaucoma in accordance with the National guidelines of Russia [5]: the first stage – 433, the second stage – 875, the third stage – 377, and the fourth stage – 211 patients. Information on the population needed to calculate the incidence rate was obtained from the State Statistics Committee.

Research results and their discussion. The overall incidence of glaucoma at the age of 40 years and older was $22.52 \pm 0.51\%$ (95% confidence interval 21.5-23.54%). The lowest level of overall morbidity was observed at the age of 40-49 years ($7.84 \pm 0.51\%$; 95% confidence interval 6.82-8.86%). Compared with this age group in the age group 50-59 years, the incidence rate ($P < 0.01$) was significantly higher – more than 2 times ($17.08 \pm 0.74\%$; 95% confidence interval 15.8-18.56%). In the age group of 60-69 years, the level of General glaucoma morbidity significantly exceeded that in the age groups of 40-49 and 50-59 years ($P < 0.01$), and was $40.06 \pm 1.63\%$ (95% confidence interval 36.8-43.32%). The highest level of overall glaucoma incidence was observed in the age group 70-79 years ($70.85 \pm 3.22\%$; 95% confidence interval 64.41-77.29%), and differed significantly from that in all age groups ($P < 0.01$). At the age of 80 years and older, the overall incidence of glaucoma ($30.15 \pm 3.68\%$; 95% confidence interval 22.79-37.51%) decreased and was close to the indicator of the age group 60-69 years, significantly different from the corresponding indicator in the other age groups.

Thus, the level of General glaucoma incidence has a linear growth trend in the age range of 40-79 years.

A comparative assessment of the level of overall morbidity in the same age groups among men and women showed that there was a significant difference in the ages of 50-59, 60-69, 70-79, 80 years and older, and in all these groups the level of overall morbidity was higher among men. The size of the relative risk of General glaucoma in the male population compared to the female was respectively: 1.44; 1.88; 2.17; 1.87.

Primary open-angle glaucoma prevails among all cases of glaucoma ($79.4 \pm 0.9\%$; 95% confidence interval 77.6-81.2%). The proportion of patients with glaucoma in stages I, II, III and IV, respectively, was: 22.8 ± 1.0 ; 46.2 ± 1.1 ; 19.9 ± 0.9 and $11.1 \pm 0.7\%$. The proportion of clinical forms of glaucoma in the age groups of patients does not differ significantly from each other. At the age of 50 years, the proportion of patients with glaucoma in the first stage was $35.4 \pm 1.9\%$ and was significantly higher in ages 50-59 ($23.2 \pm 1.8\%$), 60-69 ($19.0 \pm 1.6\%$), 70 years and older ($20.0 \pm 1.8\%$). At the age of 50 years among patients the share of persons with glaucoma of III and IV stages (respectively 5.4 ± 1.4 and $1.4 \pm 0.7\%$) is significantly less than that in ages 50-59 (16.8 ± 1.6 and $8.8 \pm 1.2\%$), 60-69 (26.9 ± 1.8 and $10.7 \pm 1.3\%$), 70 years and older (23.0 ± 1.9 and $19.3 \pm 1.7\%$).

Thus, with the age of patients with glaucoma, the proportion of persons with severe forms of pathology increases.

According to our data, the overall incidence of glaucoma in the population aged 40 years and older ($22.52 \pm 0.51\%$) is close to the corresponding indicator in Europe (2.93%).

The structure of glaucoma is dominated by primary open angle glaucoma: $79.4 \pm 0.9\%$.

Conclusion. The overall incidence of glaucoma in the population aged 40 years and older ($22.52 \pm 0.51\%$) in Baku is close to the European average. Primary open-angle glaucoma ($79.4 \pm 0.9\%$) prevails in the structure of the General glaucoma incidence in the population of Baku, the share of pathology in the III and IV stages is 19.9 ± 0.9 and $11.1 \pm 0.7\%$.

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