

DISTRIBUTION AND FEATURES OF 21-YEAR CHANGES IN RISK FACTORS FOR LIVER DISEASES OF SOCIAL SIGNIFICANCE IN THE FERGHANA VALLEY (DEPENDING ON AGE)

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Annotation

Currently, there are epidemiological approaches to the control of chronic diseases with proven medical and economic effectiveness, and most of the approaches belong to the field of prevention at the population level. The results of scientific research conducted in recent years also confirm these advanced views and reliably indicate that the course of chronic hepatitis (CH) and liver cirrhosis (LC) is mainly determined by their risk factors. The high prevalence of these diseases and risk factors directly related to their origin among the population has been confirmed.

Keywords. Chronic hepatitis, liver cirrhosis, risk factors, epidemiology.

**ФАРҒОНА ВОДИЙСИДА ИЖТИМОЙ АҲАМИЯТГА ЭГА
ЖИГАР КАСАЛЛИКЛАРИ ХАТАР**

омилларини ёшга боғлиқ ҳолда тарқалиши частоталари ҳамда 21 йиллик ўзгаришларини хос жиҳатлари.

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Аннотация. Ҳозирги вақтда, сурункали касалликларга қарши курашишнинг тиббий ва иқтисодий самарадорлиги исботланган эпидемиологик

ёндашувлар мавжуд ва ёндашувларнинг аксарияти популяция даражасидаги профилактика соҳасига тегишли. Охирги йилларда олиб борилган илмий - тадқиқот натижалари ҳам, ушбу илғор қарашларни тасдиқлаб, ишончли гу-воҳлик берадики, сурункали гепатит (СГ) ва жигар циррози (ЖЦ) кечишлари асосан, уларнинг хатар омиллари билан белгиланади. Ушбу касалликларни ва уларнинг келиб чиқишига бевосита алоқадор хатар омилларининг тарқалиш частотаси аҳоли орасида юқорилиги тасдиқланган.

Калит сўзлар. Сурункали гепатит, жигар циррози, хатар омиллари, эпидемиология.

РАСПРОСТРАНЕНИЕ И ОСОБЕННОСТИ 21-ЛЕТНИХ ИЗМЕНЕНИЙ ФАКТОРОВ РИСКА ЗАБОЛЕВАНИЙ ПЕЧЕНИ СОЦИАЛЬНОЙ ЗНАЧИМОСТИ В ФЕРГАНСКОЙ ДОЛИНЕ (В ЗАВИСИМОСТИ ОТ ВОЗРАСТА)

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Аннотация. В настоящее время существуют эпидемиологические подходы к борьбе с хроническими заболеваниями с доказанной медицинской и экономической эффективностью, причем большинство подходов относится к области профилактики на популяционном уровне. Результаты научных исследований, проведенных в последние годы, также подтверждают эти передовые взгляды и достоверно свидетельствуют о том, что течение хронического гепатита (ХГ) и цирроза печени (ЦП) в основном определяется их факторами риска. Подтверждена высокая распространенность этих заболеваний и факторов риска, непосредственно связанных с их происхождением, среди населения.

Ключевые слова. Хронический гепатит, цирроз печени, факторы риска, эпидемиология.

Relevance

Currently, there are epidemiological approaches that have been proven to be medically and economically effective in combating chronic diseases, and most of the approaches are related to population-level prevention.

The results of scientific research carried out in recent years also confirm these advanced views and provide reliable evidence that the course of chronic hepatitis (SG) and liver cirrhosis (JTs) is mainly determined by their risk factors. The prevalence of these diseases and the risk factors directly related to their origin has been confirmed to be high among the population.

Studies devoted to the study of IAEJK and its risk factors - in the countries of the European Union [1, p. 430-431; 2, p.1402], in the Russian Federation [3], Commonwealth countries [4, p.14], including Uzbekistan [5, p.17-53], Tajikistan [6, p.6-15], Kyrgyzstan [7, p.105; 8, p. 89-97], in the USA, Middle East and African countries [9].

They show the following scientific and practical, promising results: 1) modern directions of epidemiology and prevention of IAEJK are almost not studied;

2) There is no scientific data on modern risk factors of IAEJK at the population level;

3) In the conditions of Uzbekistan, there are no screening control programs on the "epidemiological pathway" of risk factors.

Carrying out scientific research in this context is a very urgent issue and necessity at the world level, including in the science and practice of Uzbekistan.

According to a number of authors, another virus that causes hepatitis is torque tenovirus (virus TT, TTV), which can be reliably differentiated and often detected in patients with viral hepatitis, in hepatitis where the viral agent has not been confirmed, and also in the healthy population [10, b. 7-22; 11, p. 1-18].

In particular, I.V. A large review by Maev (2020) analyzes the literature on the torque tenovirus, which was discovered in 1997. From the above data, it is clear that since the beginning of the study of TTV, there has been an evolution in views on the importance of the virus for the human organism. The fact that the TTV virus has a high frequency in the human population, it has been confirmed

that it is persistent in the body as part of the virome and, according to the evidence of these authors, testifies to the fact that it has a pathological nature. recommend using it as an endogenous marker [10, 6. 430-31].

These conclusions have been confirmed in many works of foreign researchers [12, p. 59-9; 13, p. 96-9; 14, p. 17-42;]. It is recognized that epidemiological research in this direction is very important for practical medicine and modern preventive science. According to the results of other modern researchers, TTV is also widespread, in some regions and geographical areas it is detected in frequencies up to 95% [15, p.1751;]. Its prevalence varies among populations in certain regions of the world and has been confirmed by various researchers in the following levels:

K.A. Nogayboeva et al. (2020) in Kyrgyzstan 2010-2017. studied the dynamics of morbidity and mortality from liver cirrhosis depending on age. The authors analyzed "Report on diseases and preventive activities (forms of state reports of family doctors' centers, dispensaries)". According to their analysis, 2010-2017. In people over 15 years of age, the average cumulative prevalence of JTs was 50.9 ‰, the average morbidity was 12.3‰, the average death rate was 45.2‰ has been The highest death rate from JTs (45.2 ‰) was recorded in people over 75 years old, the "45-59" age group took the third position after those aged ≤ 60-74 years (140.9 ‰) (92 .8 ‰). These authors also pointed out that JTs are encountered in children. 2015-2017 47 children were diagnosed with this disease and 32 children died. In general, during the observation years, death from JTs decreased by 1.6 times in adults and 1.5 times in children. [16, p. 83-85].

Currently, liver cirrhosis is considered as a chronic disease that requires a multidisciplinary approach, that is, the simultaneous joining of the forces of doctors from different specialties (with the participation of surgeons, gastroenterologists, endoscopists, radiologists, endovascular surgeons, infectious disease specialists, local therapists). is considered. Only with such an approach, it will be possible to optimize the tactics of carrying out the disease [17, p. 35-41].

Patients with cirrhosis, who have entered the stage of decompensation of liver functions, need active monitoring, treatment and prevention of their complications in the therapy area, organizing the consultation of such a team of

doctors. Otherwise, the information obtained by the researchers confirms that the path of "steatosis-steatohepatitis-fibrosis-cirrhosis-hepatocellular cancer" continues to "chain" and the risk of liver continuum increases dramatically.

The following conclusion logically follows from the above: in modern science and practice, researchers and health organizations have taken a "violent" step towards preventive hepatology..

In the era of epidemiology of chronic liver diseases, in the case of SG and JTs, only the strategy of screening and providing medical care (early diagnosis, dosological prophylaxis, dispensation, rehabilitation, pharmacological control, pharmacological screening) can control these pathologies "on the battlefield" " is possible to overcome. Such a targeted scientific concept has been formed in the problem of hepatitis and cirrhosis.

It is determined by the prevalence of 10.8 percent (in 2000) and 7.1 percent (in 2020) in the general population aged 18-90. Its high prevalence is at 18-29 years (from 2.1 and 0.00 percent, $R < 0.01$), at 30-44 (from 5.4 and 4.0 percent, $R > 0.05$) and at 45- It was confirmed at 59 (from 2.5 and 1.3 percent, $R < 0.05$) and at 60-74 years old (from 0.8 and 1.8 percent, $R < 0.01$). (Table 3 presents analytical results).

Basically, this problem is relevant in the regions and population of Uzbekistan, where the population data are outdated (Dzhumabaev T.Z et al. 1990) and they cannot be the basis for modern corrective measures against SG and JTs and/or optimization of their treatment in the new century. It is known that non-standardized and unspecified scientific approaches were used in one-stage epidemiological studies (reliability in confirming the etiological cause and/or risk factors is not considered sufficient, only prospective epidemiological studies are used for this purpose) about thirty years ago. On the other hand, the epidemiological situation regarding chronic non-infectious diseases changes in 3.5-4 years. Today, the epidemiological indicators obtained by these authors show at least a five-fold change and undoubtedly require new epidemiological studies and the development of advanced technologies for the prevention of chronic liver diseases based on them.

Therefore, the dissemination of best practices of the regions of the world for, including for Uzbekistan, chronic liver diseases and their aimed at early

detection, control, and prevention of risk factors. It is necessary to develop an epidemiological methodology and a preventive program.

The purpose of the research is of social importance in the Fergana Valley age-related distribution of risk factors of diseases (JIAEK) frequencies, as well as, to study the characteristics of 21-year changes.

Research material and methods. A population of men and women aged 18-74 with a diagnosis of chronic hepatitis and treated in the departments of the Andijan State Medical Institute (4585) were included in the study. The medical history data of patients with confirmed diagnosis of JIAEK (by clinical, questionnaire, biochemical, instrumental, functional and autopsy methods) were studied using a special questionnaire, subjective and objective clinical condition was evaluated. This questionnaire (U.K. Kayumov, 2020), approved and recommended for the identification of chronic non-infectious diseases, is standardized and unified, used in epidemiological studies and approved by the SSV of Uzbekistan. Questionnaire identification and assessment of SGs and JTs has been expanded with additional tests.

Clinical examination methods - together with the use of physical examination methods, the stage of the infection process in the blood serum of patients was determined using enzyme-linked immunosorbent assay (IFA). Using the Russian standard kit "Vetor-Best", viral hepatitis markers were singled out: HBs antigen, HBe antigen, anti HBs antibody, HDV marker for HBV infection; HCV infection: Anti-HCV total, Anti-HCV coreIgG, Anti-HCV coreIgM, Anti-HCVNS3, AntiHCVNS4, Anti-HCVNS5; HBeIgG, HBcIgG, HbclgM. Liver enzymes aspartate aminotransferase were measured by standard biochemical methods ("Vector Best" standard kit, etc.)

(AST), alanine aminotransferase (ALT), alkaline phosphatase, as well as total protein, creatinine, urea, potassium, sodium, coagulogram, glucose, iron were checked.

Instrumental examination methods - ultrasound examination (UTT) of abdominal organs (liver, spleen, portal veins, gall bladder, kidneys) was performed in patients. The test was carried out on the ALOKA-5500 Prosound (Japan) device in one-dimensional (M), two-dimensional (V) order, on a convex

sensor with a wave of 2-7.5 MHz following the generally accepted rules² (Ryxtik P.I., 2009).

When using these methods, the international standards for the detection and diagnosis of JIAEK (SG, JTs) were followed.

Research results. The prevalence of smoking as a risk factor for chronic hepatitis in different age groups was studied and the 21-year dynamics was studied in these patients (Table 1 shows the results of such analysis).

1 – table 21-year description of prevalence and frequency of smoking as a risk factor of chronic hepatitis in the population of Andijan, depending on age

Age groups, years	Male population			p	Female population			Total population		
	N	Smoking			N	Smoking		N	Smoking	
		n	%			n	%		n	%
2000 year: 18 -29	136	7	5,1	<0,05	104	0	0,0	240	7	2,9
30 – 44		11	8,1	<0,001		1	1,0		12	5,0
45 – 59		9	6,6	<0,001		1	1,0		10	4,2
60 – 74		2	1,5	-		0	0,0		2	0,8
75 – 89		0	0,0	-		0	0,0		0	0,0
≥ 90		0	0,0	-		0	0,0		0	0,0
18-90		29	21,3	<0,001		2	1,9		31	12,9
2020 year: 18 -29	115	1	0,9	>0,05	109	0	0,0	224	1	0,4
30 – 44		7	6,1	<0,05		1	0,9		8	3,6
45 – 59		1	0,9	>0,05		1	0,9		2	0,9
60 – 74		4	3,5	<0,05		2	1,8		6	2,7
75 – 89		0	0,0	-		0	0,0		0	0,0
≥ 90		0	0,0	-		0	0,0		0	0,0
18-90		13	11,3	<0,05		4	3,7		17	7,6
2000-2020 yy.	χ2 =3,799; C=0,133; RR=1,886 95%CL=1,029-3,455; P<0,05				χ2 =0,001; C=0,007; RR=0,514; 95%CL=0,096-2,748; P>0,05					

In the general population with SG, depending on age, smoking was confirmed with the following distribution frequency with gender characteristics in 2000-

2020: 1) 2.9 and 0.4 percent in the 18-29 age group ($R < 0.05$); from 5.1 and 0.9 percent in men ($R < 0.001$), from 0.00 and 0.00 percent in women; 2) in 30-44-year-olds - from 5.0 and 3.6 percent ($R < 0.05$), in men from 8.1 and 6.1 percent ($R > 0.05$), in women from 1.0 and 0.9 percent ($R < 0.05$); 3) age group 45-59 from 4.2 and 0.9 percent ($R < 0.001$), in men from 6.6 and 0.9 percent ($R < 0.001$) and in women from 1.0 and 0.9 percent ($R > 0.05$); 4) in 60-74-year-olds from 0.8 and 2.7 percent ($R < 0.01$), in men from 1.5 and 3.5 percent ($R < 0.05$) and in women from 0.00 and 1.8 percent ($R < 0.01$); 5) 0.00 and 0.00 percent in 75-90-year-olds, that is, smoking of SG patients at this age was not confirmed as a risk factor;

6) in the general population of 18-90 years old, in the population with SG, smoking was identified as an increased risk - with a prevalence of 12.9 and 7.6%; confirmed in men - from 21.3 and 11.3 percent ($R < 0.05$) and in women - from 1.9 and 3.7 percent ($R < 0.05$).

In men, the effect of smoking as a risk factor for SG was observed in age groups 18-29, 30-44, 45-59 and 60-74 ($X^2=3.799$; $S=0.133$; $RR=1.886$; 95% $CI=1.029 - 3.455$; $R < 0.05$).

In women, although it is insignificant, as this risk factor, it affects SG mainly in the age range of 30-59 and 60-74 ($X^2=0.001$; $S=0.007$; $RR=0.514$; 95% $CI=0.096 - 2.748$; $R > 0.05$).

Table 2 shows the frequency of detection of hypodynamia as a risk factor for chronic hepatitis and its 21-year dynamics by age..

2 – table Age-related frequency of detection of hypodynamia as a risk factor for chronic hepatitis and description of its 21-year dynamics

Age groups, years	Male population			P	Female population			Total population		
	N	Hypodynamia			N	Hypodynamia		N	Hypodynamia	
		n	%			n	%		n	%
2000 year: 18 -29	136	4	2,9	>0,05	104	3	2,9	240	7	2,9
30 – 44		2	1,5	>0,05		6	5,8		8	3,3
45 – 59		5	3,7	>0,05		10	9,6		15	6,3
60 – 74		4	2,9	>0,05		0	0,0		4	1,7
75 – 89		0	0,0	-		0	0,0		0	0,0
≥ 90		0	0,0	-		0	0,0		0	0,0
18-90		15	11,0	>0,05		19	18,3		34	14,2

2020 year: 18 -29	115	0	0,0	>0,05	109	1	0,9	224	1	0,4
30 – 44		0	0,0	<0,01		4	3,7		4	1,8
45 – 59		0	0,0	>0,05		4	3,7		4	1,8
60 – 74		2	1,7	>0,05		5	4,6		7	3,1
75 – 89		0	0,0	-		0	0,0		0	0,0
≥ 90		0	0,0	-		0	0,0		0	0,0
18-90		2	1,73	<0,01		14	12,8		16	7,1
2000-2020 yy	χ^2 =7,110; C=0,181; RR=6,342 95%CL=1,481-27,155; P<0,01				χ^2 =0,818; C=0,075; RR=1,422; 95%CL=0,753-2,687; P>0,05					

In patients with SG, hypodynamia affects it differently in different age groups. In 2000-2020, according to - in 18-29-year-olds - from 2.9 and 0.4 percent ($R < 0.001$), in men - from 2.9 and 0.0 percent ($R < 0.01$), in women from 2.9 and 0.9 percent ($R < 0.01$) is noted; 30-44 years old - from 3.3 and 0.4 percent ($R < 0.001$), in men from 1.5 and 0.00 percent ($R < 0.05$) and in women from 5.8 and 3.7 percent ($R > 0.05$) is recorded; in 45-59-year-olds - from 6.3 and 1.8 percent ($R < 0.01$), in men - from 3.7 and 0.00 percent ($R < 0.01$) and in women from 9.6 and 3.7 percent ($R < 0.01$); 60-74 years old - from 1.7 and 3.1 percent ($R < 0.05$), in men from 2.9 and 1.7 percent ($R < 0.05$) and in women - from 0.00 and 4.6 percent ($R < 0.01$); At ≥ 75 -90 years old – not recorded (from 0.00 and 0.00 percent).

In the 18-90-year-old SG population, hypodynamia was noted as a risk factor in 2000-2020 with a detection frequency of 14.2 and 7.1 percent ($R < 0.01$).

Age-dependent in men, confirmed in SG from 11.0 and 1.73 percent, detected with high frequencies in the age range of 18-74 ($X^2 = 7.110$; $S = 0.181$; $RR = 6.342$; $95\% CI = 1.148 - 27.155$; $R < 0.01$). In the female population, in patients with SG, this risk factor was confirmed in 18.3 and 12.8 percent ($R > 0.05$); with high frequencies were noted in 18-74 age groups ($X^2 = 0.818$; $S = 0.075$; $RR = 1.422$; $95\% CI = 0.753 - 2.687$; $R > 0.05$).

Alcohol consumption in patients with SG ≥ 18 Alcohol consumption in patients with SG ≥ 18 -90 years of age in the general population - 10.8 percent (in 2000) and 7.1 percent (in 2020) prevalence is determined. Its high prevalence frequencies are at 18-29 years (from 2.1 and 0.00 percent, $R < 0.01$), at 30-44

(from 5.4 and 4.0 percent, $R>0.05$) and at 45-59 (from 2.5 and 1.3 percent, $R<0.05$) and 60-74 years old (from 0.8 and 1.8 percent, $R<0.01$) were confirmed. (Table 3 presents analytical results).

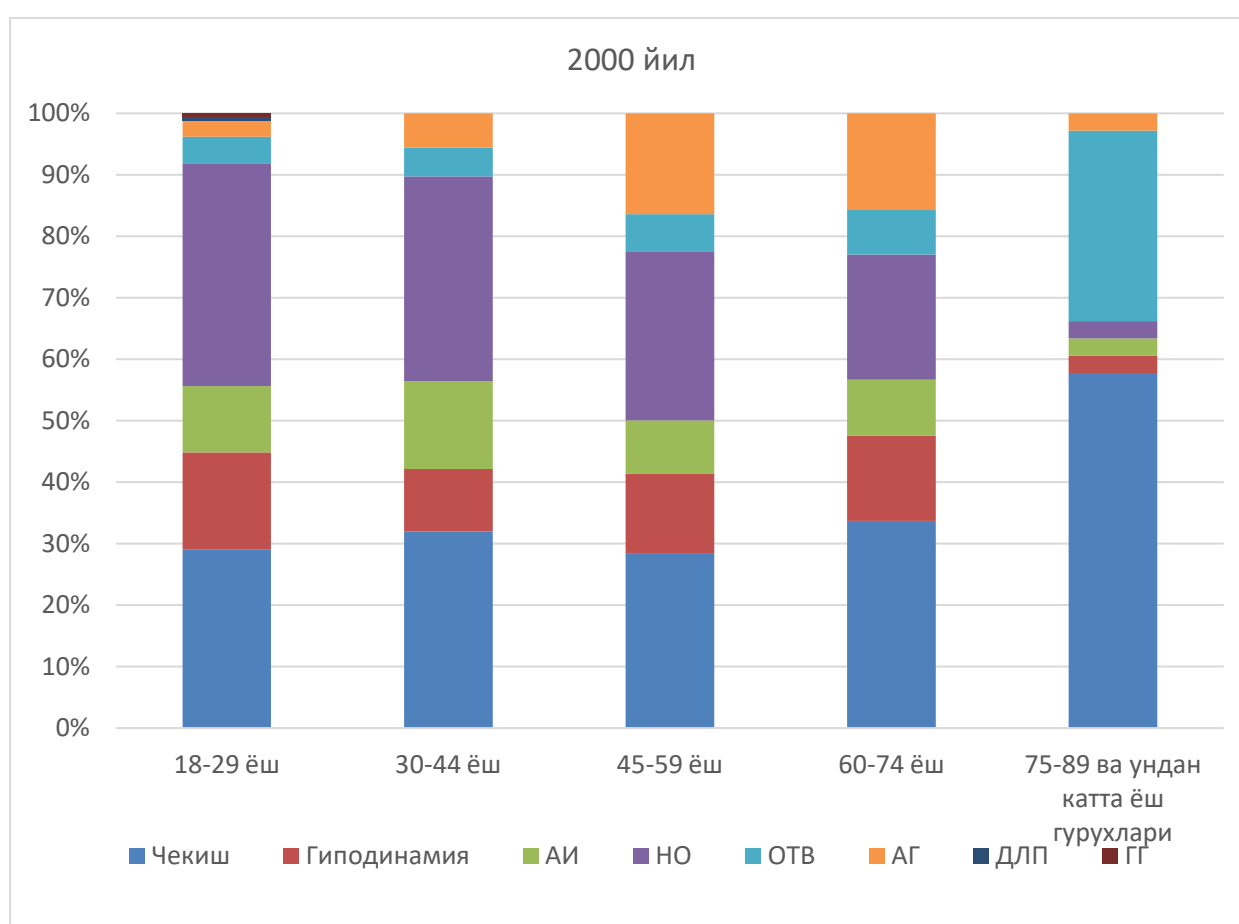
3 – table Age-related frequency of alcohol consumption as a risk factor for chronic hepatitis and description of its 21-year dynamics

Age groups, years	Male population			P	Female population			Total population		
	N	Alcohol consumption			N	Alcohol consumption		N	Alcohol consumption	
		n	%			n	%		n	%
2000 year: 18 -29	136	4	2,9	>0,05	104	1	1,0	240	5	2,1
30 – 44		12	8,8	<0,001		1	1,0		13	5,4
45 – 59		5	3,7	<0,01		1	1,0		6	2,5
60 – 74		2	1,5	>0,05		0	0,0		2	0,8
75 – 89		0	0,0	-		0	0,0		0	0,0
≥ 90		0	0,0	-		0	0,0		0	0,0
18-90		23	16,9	<0,05		3	2,9		26	10,8
2020 year: 18 -29	115	0	0,0	-	109	0	0,0	224	0	0,0
30 – 44		7	6,1	>0,05		2	1,8		9	4,0
45 – 59		3	2,6	<0,01		0	0,0		3	1,3
60 – 74		2	1,7	>0,05		2	1,8		4	1,8
75 – 89		0	0,0	-		0	0,0		0	0,0
≥ 90		0	0,0	-		0	0,0		0	0,0
18-90		12	10,4	>0,05		4	3,7		16	7,1
2000-2020 yy	χ2 =1,672; C=0,093; RR=1,621 95%CL=0,844-3,112; P>0,05				χ2 =0,004; C=0,022; RR=0,786; 95%CL=0,180-3,428; P>0,05					

In 2000-2020, the prevalence of alcohol consumption was recorded in men aged $\geq 18-90$ years - from 16.9 and 10.4 percent ($R<0.05$) and in women - from 2.9 and 3.7 percent ($R>0.05$) . As a risk factor of chronic hepatitis, JT's with the highest frequency: in women aged 18-29 (from 2.9 and 0.00 percent, $R<0.05$), in 30-44 (from 8.8 and 6.1 percent, $R>0.05$), in 45-59-year-olds (from 3.7 and 2.6%, $R>0.05$) and in 60-74-year-olds (from 1.5 and 1.7%, $R>0.05$). The

pathogenic effect of AI increasing the risk of SG origin in the male population was significant mainly in the 18-74 age group compared to other age groups ($X^2=1.672$; $S=0.093$; $RR=1.621$; 95% $CI=0.844 - 3.112$; $R>0, 05$). In the female population, such age dependence was weak and insignificant ($X^2=0.004$; $S=0.022$; $RR=0.0786$; 95% $CI=0.180 - 3.428$; $R>0.05$).

Determination of the risk factors of all socially important liver diseases in the Andijan population depending on age and characteristics of the 21-year dynamics are presented in Fig. 1.



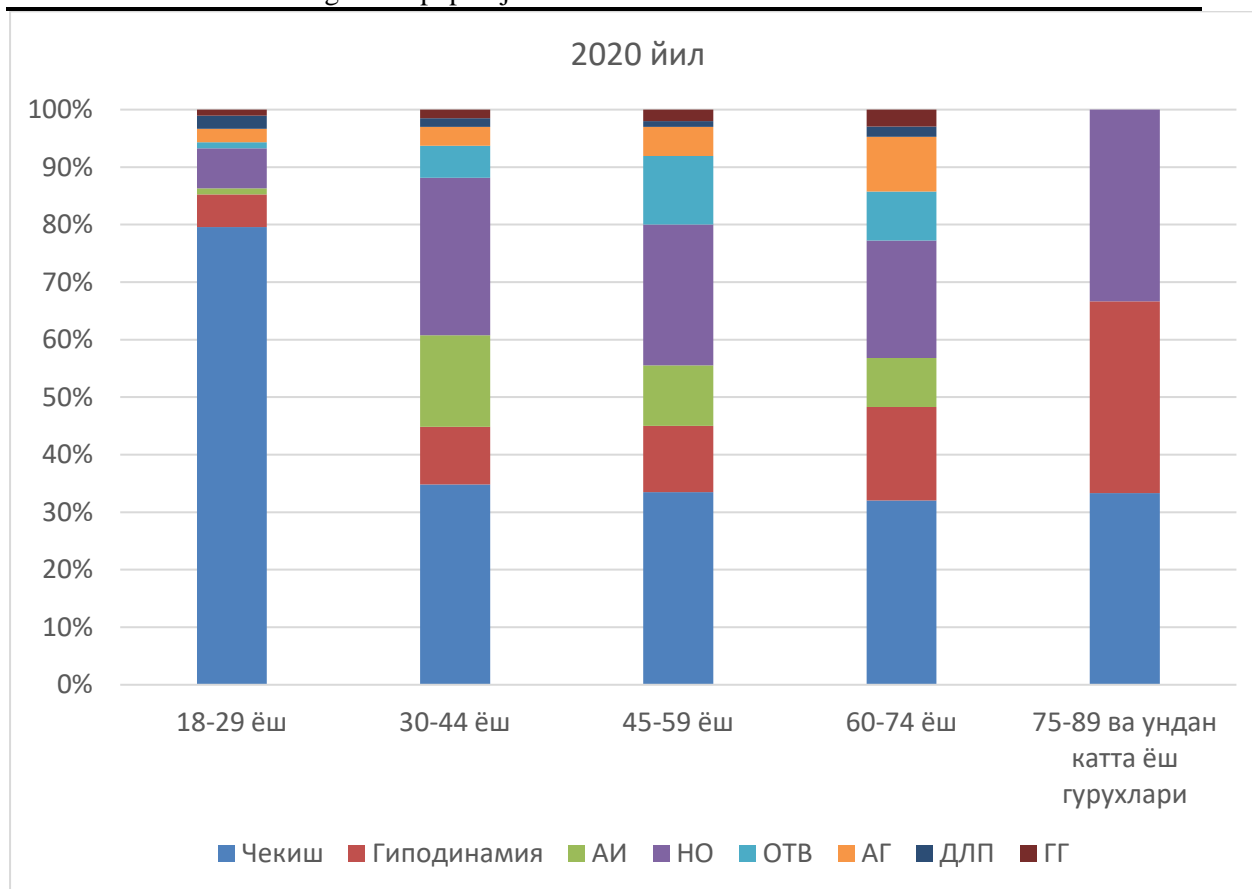


Figure 1. Determination of the risk factors of socially important liver diseases depending on age in Andijan population and 21-year dynamics.

From this picture it is clear that:

1) Smoking was confirmed as a risk factor in these diseases from 46.7 and 41.1 percent (with change in 2000-2020), in men - from 50.7 and 43.5 percent, and in women from 41.3 and 37.6 percent. High frequencies were observed in age groups 18-29, 30-44, 60-74 and 75-89. In dynamics, smoking only decreases after the age of 18-29 and ≥ 75 years, with an increasing frequency in the age groups of 40-44, 45-59 and 60-74 years, and it has been confirmed during the 21-year trend;

2) hypodynamia was confirmed as a risk factor in IAEJK - from 40.0 (in 2000) and 37.0 percent (in 2020), in men - from 40.4 and 5.2 percent, and in women - from 39.4 and 70.6 percent. Its detection in high frequencies was observed in 18-29, 30-44 and 45-59 years old. In dynamics, hypodynamia was confirmed to decrease sharply in all age groups - in men ($X^2 = 40.131$; $S = 0.379$; $RR = 0.916$; $95\% \text{ CI} = 0.778-1.077$; $P < 0.001$) and in women - the frequency of detection

increased in the 30-74 age range ($X^2 = 19.749$; $S = 0.300$; $RR = 0.558$; 95% CI = 0.427-0.729; $P < 0.001$);

3) Alcohol consumption as a risk factor from 32.0 percent (2000) and 35.2 percent (2020), men – 91.5 and 61.7, and women – 6.7 and 7.4 percent, with IAEJK confirmed in the population. High frequencies were noted in the age groups of 30-44, 45-59 and 60-74, and it was confirmed by the preservation of the growth rate (at these ages). A similar trend was observed in men ($X^2 = 2.268$; $S = 0.103$; $RR = 0.833$; 95% CI = 0.671-1.036; $P > 0.05$) and women ($X^2 = 0.009$; $S = 0.012$; $RR = 0.917$; 95% CI = 0.345-2.439; $P > 0.05$);

4) **Nutritional factors** were recorded from 88.3 (2000) and 70.5 percent (2020), in men - from 84.5 and 73.0 percent, and in women - from 93.2 and 67.9 percent in IAEJK. The highest frequencies were confirmed in the 18-29, 30-44, 45-59 and 60-74 age groups, and the 21-year dynamics was confirmed with a significant decrease, with the exception of the 30-44 age group (growth remained in this group). In men, this trend was stronger with an insignificant difference ($X^2 = 4.354$; $S = 0.140$; $RR = 1.158$; 95% CI = 1.014-1.321; $P < 0.05$), and in women it was more "gentle" expressed ($X^2 = 20.081$; $S = 0.304$; $RR = 1.374$; 95% CI = 1.195-1.579; $P < 0.001$).

5) **Excess body weight** (OBW) as a risk factor in IAEJK - 17.5 percent (2000) and 22.5 percent (2020), mainly - 18-29, 30-44, 45-59 and 60-74 years old identified in groups. It was confirmed that the "growth trend" of this factor was preserved and continued in the years of investigation.

Epidemiologically, both in the male population (with a frequency of 16.9 and 18.2 percent) ($X^2 = 0.005$; $S = 0.006$; $RR = 0.626$; 95% CI = 0.541-1.584; ; $P > 0.05$) characterization proved OTV as a risk factor ($X^2 = 1.668$; $S = 0.099$; $RR = 0.686$; 95% CI = 0.411-1.146; ; $P > 0.05$)

6) Arterial hypertension (AG) was confirmed as a risk factor for IAEJK in the population aged $\geq 18-90$ years - 36.2 percent (2000) and 16.5 percent (2020). It is noted with a prevalence of 27.9 and 8.7 percent in men and 18.3 and 24.8 percent in women. It was found in high frequencies - in age groups 30-44, 45-59 and 60-74, most (in the general population and in men) is expressed by a decreasing trend ($X^2 = 13.704$; $S = 0.237$; $RR = 3.213$; 95% CI = 1.676 - 6.160; $P < 0.001$). In women, in the indicated age groups, according to the 21-year trend, the "increasing frequency" of AG was confirmed as $X^2 = 10.625$; $S = 0.277$;

RR = 1.902; 95% CI = 1.294 - 2.796; $P > 0.05$). 7) DLP is confirmed as a risk factor mainly in the 30-44 age group (year 2000), 18-29, 30-44, 45-59 and 60-74 age groups, and is determined by the "increasing tendency". Exactly the same trend

8) has been proven in the 21-year trend that it also applies to hyperglycemia.

Conclusions

1. Age groups of 18-29 and 60-74 years of age, < 18 years of age and 75-89 years of age are confirmed as the age groups of the highest risk for IAEJK.

2. The following risk factors (smoking, hypodynamia, alcohol consumption, nutritional factors, excess body weight, arterial hypertension, hypercholesterolemia, hyperglycemia, hypertriglyceridaemia) have been confirmed in the Andijan conditions of the Fergana Valley. Risk factors were identified in a 21-year trend with high frequency distribution and change: smoking - from 40.4 and 42.4 percent, hypodynamia - from 41.7 and 37.1 percent, alcohol consumption - from 32.1 and 35.3 percent, nutritional factors - from 97.5 and 73.2 percent, excess body weight - from 17.9 and 24.1 percent, AG - from 36.7 and 16.5 percent.

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