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Prevalence Of The Main Behavioral Risk Factors And Their Role In The Formation Of "Aggressive" Epidemiological Conditions In Relation To Cholelithiasis Among The Population Of Gerontological Age In The Fergana Valley (Results Of A Screening Study)

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Abstract: The article presents modern, foreign and domestic data on the problem of epidemiology, prevention and treatment of cholelithiasis (gallstone disease). The analysis of population studies and preventive programs forcholelithiasisin the population of the gerontological and geriatric group is carried out. The article discusses modern recommendations for the use of screening, various types of preventive studies, conservative and surgical methods of treatment of cholelithiasis.
Keywords: cholelithiasis, epidemiology, prevention, pharmaco-epidemiology, risk factors, geriatric features of early detection and treatment of cholelithiasis.

The aim of the study is to study the prevalence, pharmacoepidemiology of cholelithiasis and its main risk factors among the male and female unorganized population of the gerontological group of the Fergana Valley to enable scientifically based planning and optimization of early diagnosis, prevention and treatment of this disease.

Materials and methods. **The object of the study** The sample included a contingent of 4,500 individuals from the gerontological age population, formed using random number tables based on the nominal electoral lists of men and women in three regions of the Fergana Valley; as well as 779 patients with cholelithiasis who were undergoing inpatient treatment in the regional multidisciplinary hospitals of Andijan, Namangan and Fergana (for VEN analysis).

Subject of the research There were results of general clinical and biochemical blood tests, a survey, physical, instrumental and pharmacoepidemiological monitoring; as well as the method of “daily nutrition reproduction” adapted to the peculiarities of Uzbek cuisine.

Research methods. To solve the set tasks, epidemiological, clinical, laboratory, biochemical, instrumental, pharmacoepidemiological and statistical research methods were used, as well as the “daily nutrition reproduction” method.

Results and discussion. We studied the epidemiology and determined the roles of the main behavioral risk factors in the formation of “aggressive” epidemiological conditions in relation to cholelithiasis among the gerontologically aged population of the Fergana Valley.

Thus, it turned out that the prevalence of hypertension in the conditions of the German Valley among the population ≥ 60 – 90 years old is recorded with a frequency of 42.1% in men and 57.9% in women ($X2^{=}$ 0.304; P>0.05; $RR^{=}$ 1.014; 95% CI = 0.975 – 1.055).

Among the population aged 60–74 years, hypertension was characterized by a detection rate of 61.3%; among the male population, its prevalence was 26.5% and among the female population – 34.8% ($X2^{=}$ 0.865; P>0.05; $RR^{=}$ 1.002; 95% CI = 0.974 – 1.076).

In the age group 75–89 years, hypertension was determined with a frequency of 35.8%, in men and women by 14.6% and 21.2%, respectively ($X2^{=}$ 0.004; P>0.05; $RR^{=}$ 1.002; 95% CI = 0.937 – 1.072). The prevalence of this significantly significant risk factor among the population in the age group ≥ 90 years was 2.9%, among the male population 42.1% and among the female population – 57.9% ($X2^{=}$ 0.504; P>0.05; $RR^{=}$ 1.014; 95% CI = 0.975 – 1.055).

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Table – 1
Epidemiology of arterial hypertension as a risk factor for cholelithiasis among female and male unorganized population of gerontological age in the Fergana Valley

Age groups, years	Arterial hypertension						χ^2	P	RR	95%CI
	Male population		Female population		Total					
	n	%	n	%	n	%				
60 - 74 years	824	26,5	1084	34,8	1908	61,3	0,865	>0,05	1,024	0,974-1,076
75 - 89 years	455	14,6	661	21,2	1116	35,8	0,004	>0,05	1,002	0,937-1,072
≥90 years	31	1,0	58	1,9	89	2,9	0,124	>0,05	0,960	0,760-1,211
Total	1310	42,1	1803	57,9	3113	100,0	0,504	>0,05	1,014	0,975-1,055

Table – 2
Gender and age characteristics of the epidemiology of arterial hypertension as a risk factor for cholelithiasis in the population of the gerontological group of Namamgan

Age groups, years	Arterial hypertension						χ^2	P	RR	95%CI
	Male population		Female population		Total					
	n	%	n	%	n	%				
60 - 74 years	190	18,0	204	19,4	394	37,4	4,829	<0,05	1,127	1,014-1,253
75 - 89 years	242	23,0	380	36,1	622	59,0	1,431	>0,05	0,948	0,868-1,036
≥90 years	15	1,4	23	2,2	38	3,6	0,244	>0,05	0,903	0,599-1,362
Total	447	42,4	607	57,6	1054	100,0	0,111	>0,05	1,011	0,946-1,081

Table – 3
Gender and age characteristics of the epidemiology of arterial hypertension as a risk factor for cholelithiasis in the population of the gerontological group of Fergana

Age groups, years	Arterial hypertension						χ^2	P	RR	95%CI
	Male population		Female population		Total					
	n	%	n	%	n	%				
60 - 74 years	282	27,4	465	45,1	747	72,5	4,772	<0,05	0,912	0,838-0,992
75 - 89 years	116	11,3	145	14,1	261	25,3	1,547	>0,05	1,091	0,953-1,250
≥90 years	4	0,4	19	1,8	23	2,2	1,014	>0,05	1,263	1,029-1,551
Total	402	39,0	629	61,0	1031	100,0	1,588	>0,05	0,956	0,891-1,026

In the population of Namangan, the prevalence of hypertension in the age group ≥ 60 – 90 years was 57.6% among women and 42.4% among men (X2 = 0.111; P>0.05; RR= 1.011; 95% CI = 0.946 – 1.081). Data in this regard are presented in Table 2 and Fig. 1.

The prevalence of hypertension among the examined Namangan residents aged 60–74 years was 37.4%, in women – 19.4% and in men – 18.0% (X2 =4.829; P<0.05; RR=1.127; 95% CI =1.014 – 1.253). Among individuals aged 75–89 years, it occurred with a frequency of 59.0%, and in the male population 23.0% and in the female population – 36.1% (X2 =1.431; P>0.05; RR=0.948; 95% CI =0.868 – 1.036). Among ≥ 90 year olds, it was recorded with a frequency of 3.6%, 1.4% (in men) and 2.2% (in women of Namangan) (X2 = 0.111; P>0.05; RR= 1.011; 95% CI = 0.946 – 1.081).

Further, Table 3 and Fig. 1 present data on the epidemiology of hypertension among the gerontologically aged population of Fergana. In this age group, hypertension occurs with a prevalence rate of 39.0% (among the male population) and 61.0% (among the female population) (X2 =1.588; P>0.05; RR=0.956; 95% CI =0.891 – 1.026).

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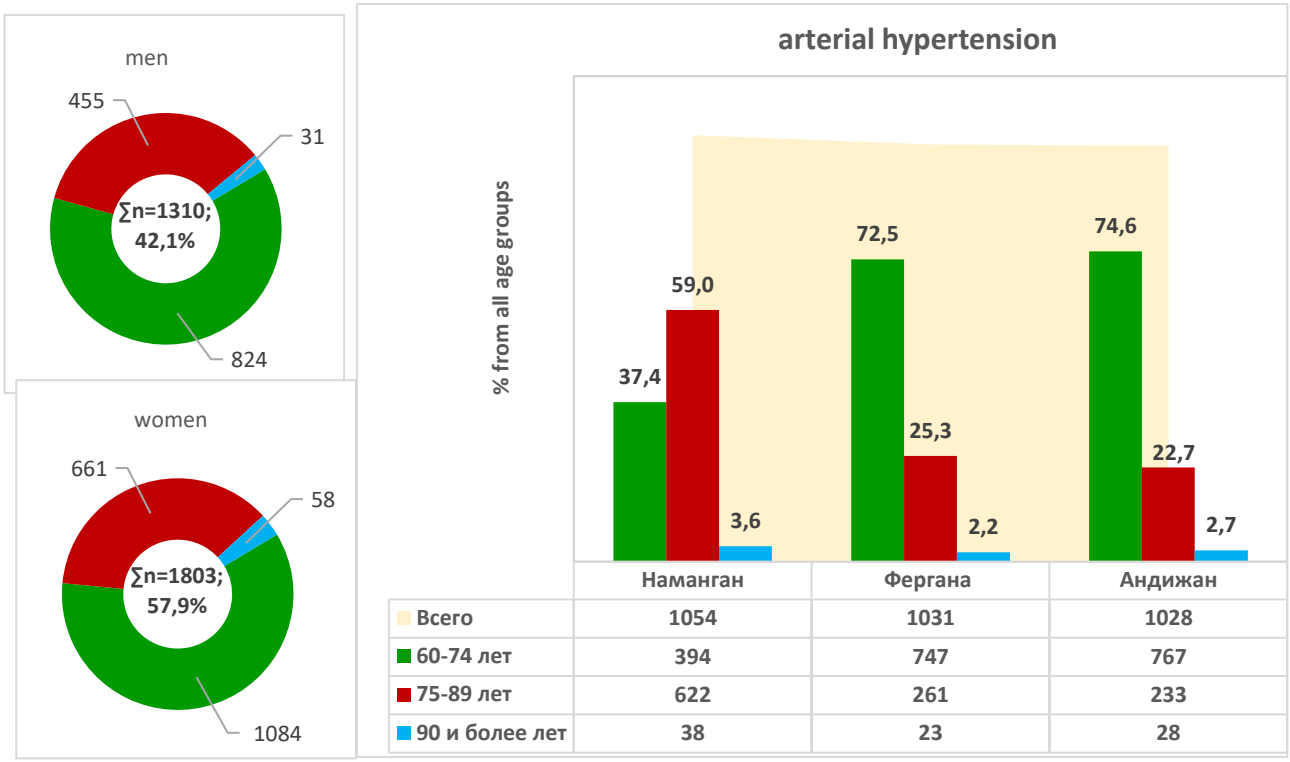

	Наманган	Фергана	Андижан
Всего	1054	1031	1028
60-74 лет	394	747	767
75-89 лет	622	261	233
90 и более лет	38	23	28

Fig. 1. Epidemiology of arterial hypertension (AH) as a risk factor for cholelithiasis among female and male unorganized gerontological population of the Fergana Valley

The prevalence of hypertension among 60–74 year olds in Fergana was 72.5%, among males 27.4% and among females 45.1% (X2 =4.772; P<0.05; RR=0.912; 95% CI =0.838–0.992). In the surveyed population aged 75–89, the prevalence of hypertension was 25.3%, among males 11.3% and among females 14.1% (X2 =1.547; P>0.05; RR=1.091; 95% CI =0.953–1.250). Among the population ≥ 90 years old, the detection rate of hypertension in the conditions of Fergana was 2.2%, among the male and female population it was recorded at a detection rate of 0.4% and 1.8%, respectively (X2 =1.014; P>0.05; RR=1.263; 95% CI = 1.029 – 1.551).

The following analysis is devoted to the study of gender and age characteristics of the behavioral risk factor of hypertension among the population of the gerontological group (≥ 60 – 90 years) of Andijan (Table 4 and Fig. 1).

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It was established that the prevalence of hypertension in the population of Andijan ≥ 60 – 90 years old is 44.8% among the male population and 55.2% among the female population (X2 =4.534; P<0.055; RR=1.078; 95% CI = 1.007 – 1.154). And in the population of this region in the age group of 60 – 74 years, its prevalence was 74.6%, and among the male population - 34.2% and among the female population - 40.4% (X2 =4.082; P<0.05; RR=1.083; 95% CI = 1.003 – 1.170). The prevalence of hypertension in the group of Andijan surveyed in

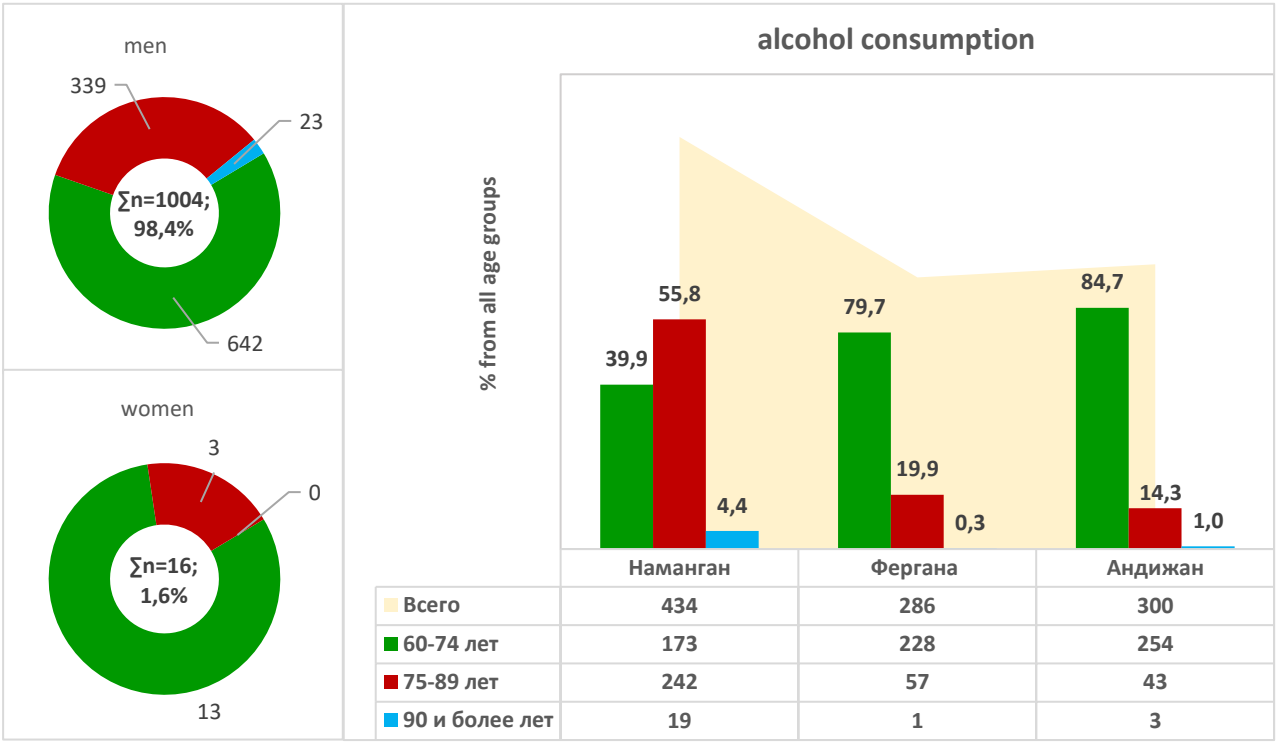

Fig. 2. Epidemiology of alcohol consumption (AC) as a risk factor for cholelithiasis among female and male unorganized gerontologically aged population of the Fergana Valley

In women aged 75–89 years, the incidence rate was 22.7%, in men 9.4% and in women 13.2% (X2 = 0.405; P>0.05; RR=1.053; 95% CI = 0.898 – 1.234). Such rates of hypertension among persons ≥ 90 years were characterized by levels of 2.7%, 1.2% and 1.6%, respectively, in men and women (X2 = 0.014; P>0.05; RR=1.018; 95% CI = 0.702 – 1.359).

When studying the epidemiology of hypertension in three separate regions (Andijan, Namangan and Fergana) of the Fergana Valley, it was established that its prevalence among the population ≥ 60–90 years old is observed at the following prevalence levels: in Andijan – 33.0% (at 60–74 years old – 24.6%, at 75–89 years old – 7.5% and at ≥ 90 years old – 0.9%), in Namangan – 33.9% (at 60-74 years old – 12.7%, at 75–89 years old – 20.0% and at ≥ 90 years old – 1.2%) and in Fergana – 33.1% (at 60–74 years old – 24.0%, at 75–89 years old – 8.4%, at ≥ 90 years old – 0.7%). As can be seen, in the three regions the prevalence of hypertension among those examined is determined without significant differences (P>0.05).

Table – 4

Gender and age characteristics of the epidemiology of arterial hypertension as a risk factor for cholelithiasis in the population of the gerontological group of Andijan

Age groups, years	Arterial hypertension						χ^2	P	RR	95%CI
	Male population		Female population		Total					
	n	%	n	%	n	%				
60 - 74 years	352	34,2	415	40,4	767	74,6	4,082	<0,05	1,083	1,003-1,170
75 - 89 years	97	9,4	136	13,2	233	22,7	0,405	>0,05	1,053	0,899-1,234
≥90 years	12	1,2	16	1,6	28	2,7	0,014	>0,05	1,018	0,762-1,359
Total	461	44,8	567	55,2	1028	100,0	4,534	<0,055	1,078	1,007-1,154

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Table – 5
Comparative age epidemiology of arterial hypertension as a risk factor for cholelithiasis among the population of the gerontological group depending on the regions of the Fergana Valley

Age groups, years	Arterial hypertension								χ^2		P	RR	95%CI
	Andijan [1]		Namangan [2]		Fergana [3]		Total						
	n	%	n	%	n	%	n	%					
60-74 years	767	24,6	394	12,7	747	24,0	1908	61,3	1-2	0,056	>0,05	0,992	0,929-1,060
									1-3	0,640	>0,05	1,023	0,968-1,082
									2-3	0,794	>0,05	1,031	0,965-1,102
75-89 years	233	7,5	622	20,0	261	8,4	1116	35,8	1-2	8,334	>0,05	0,882	0,807-0,965
									1-3	2,853	>0,05	0,914	0,824-1,015
									2-3	0,764	>0,05	1,036	0,956-1,123
≥90 years	28	0,9	38	1,2	23	0,7	89	2,9	1-2	5,636	<0,05	1,384	1,084-1,768
									1-3	0,081	>0,05	1,033	0,825-1,294
									2-3	3,840	<0,05	0,746	0,574-0,970
Total	1028	33,0	1054	33,9	1031	33,1	3113	100,0	1-2	1,061	>0,05	0,975	0,930-1,023
									1-3	0,014	>0,05	0,997	0,950-1,047
									2-3	0,832	>0,05	1,022	0,975-1,072

When studying the epidemiology of hypertension in three separate regions (Andijan, Namangan and Fergana) of the Fergana Valley, it was established that its prevalence among the population ≥ 60–90 years old is observed at the following prevalence levels: in Andijan – 33.0% (at 60–74 years old – 24.6%, at 75–89 years old – 7.5% and at ≥ 90 years old – 0.9%), in Namangan – 33.9% (at 60-74 years old – 12.7%, at 75–89 years old – 20.0% and at ≥ 90 years old – 1.2%) and in Fergana – 33.1% (at 60–74 years old – 24.0%, at 75–89 years old – 8.4%, at ≥ 90 years old – 0.7%). As can be seen, in the three regions the prevalence of hypertension among those examined is determined without significant differences (P>0.05).

Table 6 and Fig. 2 present data on the epidemiology of alcohol consumption (AC) as a risk factor for cholelithiasis among the female and male population of the unorganized gerontological population of the Fergana Valley.

Table – 6
Epidemiology of alcohol consumption as a risk factor for cholelithiasis among female and male unorganized gerontologically aged population of the Fergana Valley

Age groups, years	Alcohol consumption						χ^2	P	RR	95%CI
	Male population		Female population		Total					
	n	%	n	%	n	%				
60 - 74 years	642	62,9	13	1,3	655	64,2	1080,8	<0,001	66,52	38,62-114,6
75 - 89 years	339	33,2	3	0,3	342	33,5	610,7	<0,001	164,5	53,02-510,4
≥90 years	23	2,3	0	0,0	23	2,3	50,79	<0,001	0,477	0,350-0,650
Total	1004	98,4	16	1,6	1020	100,0	1743,7	<0,001	87,61	53,65-143,1

Table – 7
Gender and age characteristics of the epidemiology of alcohol consumption as a risk factor for cholelithiasis in the population of the gerontological group of Namangan

	Alcohol consumption	χ^2	P	RR	95%CI

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Age groups, years	Male population		Female population		Total					
	n	%	n	%	n	%				
60 - 74 years	171	39,4	2	0,5	173	39,9	291,0	<0,001	103,5	25,93-412,9
75 - 89 years	242	55,8	0	0,0	242	55,8	496,7	<0,001	0,316	0,271-0,369
≥90 years	19	4,4	0	0,0	19	4,4	37,93	<0,001	0,269	0.143-0,507
Total	432	99,5	2	0,5	434	100,0	825,3	<0,001	296,6	74,24-185,4

The detection rate of UA in the Fergana Valley among individuals aged ≥ 60–90 years is – among the male population – 98.4% and among the female population – 1.6% (X2 =1743.7; P<0.001; RR=87.61; 95% CI = 53.65 – 143.1). The detection rate of UA among those examined aged 60–74 years was – 64.2%, among the male population – 62.9% and among the female population – 1.3% (X2 =1080.8; P<0.001; RR=66.52; 95% CI = 38.62 – 114.6). The prevalence rate of UA among the population of the Fergana Valley aged 75–89 years was 33.5%, among the male population 33.2% and among the female population 0.3% (X2 =610.7; P<0.001; RR=164.5; 95% CI = 53.02 – 510.4). UA occurred in 2.3% of the population ≥ 90 years old (in men – 2.3% and in women – 0.0%) (X2 =1743.7; P<0.001; RR=87.61; 95% CI = 53.65 – 143.1).

The same analysis was conducted in the group of the gerontologically aged population of Namangan (Table 7 and Fig. 2). In the conditions of Namangan, among the female and male population ≥ 60 – 90 years old, the frequency of UA was 0.5% and 99.5%, respectively (X2 =825.3; P<0.001; RR=29.66; 95% CI = 74.24 – 185.4). Among the population of this region aged 60 – 74 years, the frequency of UA was 39.9%, among the male population 39.4% and among the female population 0.5% (X2 =291.0; P<0.001; RR=103.5; 95% CI = 23.93 – 412.9).

In the group of individuals aged 75-89 years, the incidence of UA was noted in 55.8% of cases, among the male population - 55.8% and among the female population - 0.0% (X2 =496.7; P<0.001; RR=0.316; 95% CI = 0.271 - 0.369). In the group of examined people from Namangan ≥ 90 years, UA is observed with a frequency of 4.4%, among the male population - 4.4% and among the female population - 0.0% (X2 =37.93; P<0.001; RR=0.269; 95% CI = 0.143 - 0.507).

Table – 8

Gender and age characteristics of the epidemiology of alcohol consumption as a risk factor for cholelithiasis in the population of the gerontological group of Fergana

Age groups, years	Alcohol consumption						χ^2	P	RR	95%CI
	Male population		Female population		Total					
	n	%	n	%	n	%				
60 - 74 years	221	77,3	7	2,4	228	79,7	390,4	<0,001	47,47	22,58-99,74
75 - 89 years	54	18,9	3	1,0	57	19,9	75,45	<0,001	24,56	7,816-77,148
≥90 years	1	0,3	0	0,0	1	0,3	6,222	<0,01	0,750	0,426-1,321
Total	276	96,5	10	3,5	286	100,0	468,7	<0,001	41,28	22,16-76,93

Table 8 and Fig. 2 present the prevalence rate of UA among the gerontologically aged population of Fergana, Fergana Valley.

In the conditions of Fergana, UA among the male and female population ≥ 60 – 90 years old is observed with a frequency of 96.5% and 3.5%, respectively (X2 =468.7; P<0.001; RR=41.28; 95% CI = 22.16 – 76.93). It is noted that among 60 – 74 year old individuals, the incidence of UA is observed with a frequency of 0.3%, among the male population – 0.3% and among the female population 0.0% (X2 =6.222; P<0.001; RR=0.750; 95% CI = 0.426 – 1.321). Among the population of Fergana in the age group of 75–89 years, UA was observed in 19.9% of those examined, among the male population – 18.9% and among the female population – 1.0% (X2 = 75.45; P<0.001; RR=24.56; 95% CI = 7.816 – 77.148).

In the conditions of Fergana, the prevalence rate of UA among the population ≥ 90 years old was established at 0.3% of cases, in men – 0.3% and in women – 0.00% (X2 =6.222; P<0.001; RR=0.750; 95% CI = 0.426 – 1.321).

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Table 9 and Fig. 2 present the gender and age characteristics of the epidemiology of alcohol consumption in the population of the gerontological group of Andijan.

From the presented data it follows that in the population of 60-90 years of Andijan the detection rate of UA was – in the male population – 98.7% and in the female population – 1.3% (X2 =474.1; P<0.001; RR=98.09; 95% CI = 36.7 – 261.7). In addition, in the population of Andijan aged 60-74 years the frequency of UA was detected with a frequency of 84.7%, in men 83.3% and in women – 1.3% (X2 =399.2; P<0.001; RR=79.82; 95% CI = 29.94 – 212.8).

The incidence of UA in the age group of 75–89 years was 14.3%, among the male population 14.3% and among the female population – 0.0% (X2 =71.75; P<0.001; RR=0.715; 95% CI = 0.647 – 0.791). This risk factor also occurred in the Andijan population aged ≥ 90 years: among them, UA was observed in 1.0% of cases, among the male population – 1.0% and among the female population – 0.0% (X2 =4.479; P<0.05; RR=0.785; 95% CI = 0.598 – 1.033).

Table – 9

Gender and age characteristics of the epidemiology of alcohol consumption as a risk factor for cholelithiasis in the population of the gerontological group of Andijan

Age groups, years	Alcohol consumption						χ^2	P	RR	95%CI
	Male population		Female population		Total					
	n	%	n	%	n	%				
60 - 74 years	250	83,3	4	1,3	254	84,7	399,2	<0,001	79,82	29,94-212,8
75 - 89 years	43	14,3	0	0,0	43	14,3	71,75	<0,001	0,715	0,647-0,791
≥90 years	3	1,0	0	0,0	3	1,0	4,479	<0,05	0,785	0,598-1,033
Total	296	98,7	4	1,3	300	100,0	474,1	<0,001	98,09	36,77-261,7

Table – 10

Comparative age epidemiology of alcohol consumption (AC) as a risk factor for cholelithiasis among the population of the gerontological group depending on the regions of the Fergana Valley

Age groups, years	Arterial hypertension								χ^2		P	RR	95%CI
	Andijan [1]		Namangan [2]		Fergana [3]		Total						
	n	%	n	%	n	%	n	%					
60-74 years	254	24,9	173	16,9	228	22,3	655	64,2	1-2	146,3	<0,001	2,124	1,874-2,407
									1-3	2,454	>0,05	1,062	0,985-1,146
									2-3	110,9	<0,001	0,500	0,439-0,569
75-89 years	43	4,21	242	23,7	57	5,59	342	33,5	1-2	128,2	<0,001	0,257	0,193-0,343
									1-3	3,241	>0,05	0,719	0,501-1,032
									2-3	91,15	<0,001	2,798	2,186-3,582
≥90 years	3	0,29	19	1,86	1	0,09	23	2,25	1-2	6,961	<0,05	0,228	0,068-0,765
									1-3	0,913	>0,05	2,860	0,299-27,34
									2-3	10,36	<0,05	12,52	1,685-93,01
Total	300	29,4	434	42,5	286	28,0	1020	100,0	1-2	48,93	<0,001	0,691	0,622-0,768
									1-3	0,669	>0,05	0,837	0,743-0,944
									2-3	48,57	<0,001	1,517	1,362-1,690

In separate analyses and comparisons of the data obtained for three regions of the Fergana Valley (Table 10 and Fig. 2), the following rates of alcohol consumption among the gerontologically aged population were established: in the Andijan region – 29.4% (at 60–74 years old – 24.9%, at 75–89 years old – 4.21%, at ≥ 90 years old – 0.29%), in Namangan – 42.5% (at 60–74 years old – 16.9%, at 75–89 years old – 23.7%, at ≥ 90 years old – 1.86%) and in Fergana – 28.0% (at 60–74 years old – 22.3%, at 75–89 years old – 5.59%, at ≥ 90 years old – 0.09%). In general, in the Fergana Valley, the frequency of UA by age groups was: in the

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group of people aged 60–74 years – 64.2%, in the group of people aged 75–89 years – 33.5%, and in the group of people ≥ 90 years – 2.25%.

Consequently, UA also plays a certain role in the formation of "aggressive" epidemiological conditions among the gerontological population of the Fergana Valley in relation to cholelithiasis.

Conclusion

The prevalence of cholelithiasis in the gerontological population (≥60–90 years) of the Fergana Valley, estimated by epidemiological criteria, was 42.5% among men and 57.5% among women. Relatively high prevalence rates were found in the groups of men and women aged 60–74 and 75–89 years, while in the group ≥90 years, the prevalence rates were significantly lower.

List Of Used Literature

1. Алиев Р.К., Рамащенко П.Н., Майстренко М.А., Прядко А.С., Алиев А.К. Непреднамеренные травмы желчевыводящих протоков: пути профилактики и лечения Вестник Российской Военно – медицинской академии. 2021: 23 (3): 55 – 58.
2. Бебуришвими А.Г., Панин С.Н., Зюбина Е.Н., Нестеров С.С., Пузикова А.В. Холецистомия при острой холецистите//Хирургия. Журнал имени Н.И. Пирогова. – 2020; №6 – С. – 45.
3. Ботыров Д.А. Геронтологические особенности холецистита в условиях Ферганской долины//Хирургия. 2024.
4. Балалыкин А.С. Эндоскопическая папиллосфинктерапия. Руководства по химической эндоскопии М. 1985; 290 – 314.
5. Лыткин М.И., Тетдаев А.М., Стойко Ю.М. Нужно ли защищать холецистостомию при остром холецистите?//Хирургия. – 1978; 7: 10 – 12.
6. Майстренко Н.А., Рамащенко П.Н., Прядко А.С., Алиев А.К. Обоснование хирургической тактики при ятрогенных повреждениях желчевыводящих протоков. Вестник хирургии им И.И. Грекова 2015: 174 (5): 22 – 30.
7. Майстренко Н.А., Ромащенко П.Н., Алиев А.К., Сибиров С.А. Острое повреждение желчевыводящих протоков. Вестник Российской Военно – Медицинской академии. 2016: 1 (53): 124 – 128.
8. Нургазинова А.К. Происхождение, развитие и современная трактовка понятий "коморбидность и колиморбидность"//Казанский Медицинский журнал. 2014; 2: 95: 292 – 294.
9. Прядко А.С., Ромащенко П.Н., Майстренко М.А., Алиев А.К. и др. Реализация программы "безопасная холецистэктомия" в Ленинградской области//Хирургия. Журнал ишни Н.И. Пирогова. – 2023. - №10. – С. 109 – 116.
10. Ромащенко П.Н., Майстренко Н.А., Преядко А.С., Алиев А.К. Травмы желчевыводящих протоков и системный подход к их устранению//Анналы хирургической гепатологии. 2019; 24 (1): 71 – 80.
11. Ромащенко П.Н., Майсаренко Н.А., Прядко А.С., Алиев А.К., Алиев Р.К., Жеребцов Е.С. Профилактика и лечение повреждений желчевыводящих протоков у больных острым холециститам.//Анналы хирургической гепатологии. 2020: 25 (3): 20 – 31.
12. Цеймах А.Е., Куртуков В.А., Мищенко А.Н., Теплухин В.Н., Шойхет Я.Н. и др. Применение мини – инвазивных технологий литотрипсии и антеградной гидравлической литоэкстракции в комплексном лечении больных холедохолитиазам.//Хирургия. Журнал Имени Н.И. Пирогова. – 2023 - №4: С. 5 – 11.
13. ASGE Standards of Practice Committee, Buxbaum JL, Abbas Fehmi SM, Siltan S, Fishman DS, Qumseya BJ, Cortessis VK, Schilperoot H, Kysh L, Matsuoka L, Yachimski P, Agrawal D, Gurudu SR, Jamil LH, Jue TL, Khashab MA, Law JK, Lee SK, Naveed M, Sauhney MS, Thosani N, Yang J, Wani SB, ASGE guideline on the role of endoscopy in the evaluation and management of choledocholithiasis. Gastrointest Endose. 2019: 89 (6): 1075 – 1105. E 15. https://doi.org/10.1016/j.gie 2018.10.001.
14. Barbara L, Sama C, Morselli Labate AM, Taroni F, Rusticali AG, Festi D, Sapio C, Roda E, Banterle C, Puci A. A population study on the prevalence of gallstone disease: the Sirmione Study. Hepatology. 1987: 7(5):913-916. https://doi.org/10.1002/hep. 1840070520.

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15. Bignell M, Dearing M, Hindmarsh A, Rhodes M. ERCP and endoscopic sphincterotomy (ES): a safe and definitine management of gallstone pancreatitis with the gallbladder left in situ. Journal of Gastrointestinal Surgery. 2011: 15(12): 2205 – 2210. https://doi.org/10.1007/S 11605 - 011 - 1729 – X
16. European Association for the Study of the Liver (EASL). EASL Clinical Practice Guidelines on the prevention. Diagnosis and treatment of gallstones. J Hepatol. 2016:65(1):146 – 180. https://doi.org/10.1016/j.jhep.2016.03.005.
17. Felekouras E, Petrou A, Neofytou K, Moris D, Dimitrokallis N, Bramis K, Griniatsos J, Pikoulis E, Diamantis T. Early of Delayed Intervention of Bile Duet Injuries tollowing Laparoscopic Chole cyctectomy? A Dilemma Looking for an Answer. Gastroenterology Research and Practice. 2015:2015:104235. https://doi.org/10.1115/2015/104235.
18. Hariharan D, Psaltis E, Schole Field JH, Lobo DN, Quality of life and Medico – Legal Implications Following latrogenic Bile Dust Injuries. World Journal of Surgery 2017:41 (1):98. https://doi.org/10.1007/S00268 - 016 - 3677 – 9.
19. Lukina Yu V, Kutishenko NP. Martsevich SYu. The problem of adherence to the treatment in modern medicine: possibilities of solution, impact on the effectiveness of therapy and disease out comes. Rational Pharmacotherapy in Cardiology. 2017:13 (4): 519 – 24.
20. L Yu J, Lin Q, Fang Z, et al. Complex impacts of gallstone disease on metabolic syndrome and nonalcoholic fatty liver disease. Front Endocrinol (Lausanne). 2022:13:1032557. doi:10.3389/fen do 2022. 1032557.
21. Lee HM, Min SK, Lee MK. Long – term results of laparoscopic common bile dust exploration by chole dichotomy for choledocholithiasis:15 – year experience from a single center – Ann Surg Treat Res. 2014:86:1 – 4. https://doi.org/10.4174/astr.2014.86.1.1.
22. Maystrenko N, Romashenko P, Aliev A, Sibirev SA. Acute injury of bile duets. Research Journal of Medical Sciences. 2016: 10(1): 740 – 742.
23. Manes G, Paspatis G, Aabakken L, Anderloni A, Arvanitakis M, Ah Soune P, Barthet M, Domogk D, DumonceauJM, Gigot JK, Hritz I, Karamanolis G, Laghi A, Mariani A, Paraskeva K, Pohl J, Ponchon I, Swahn F, Ter Stuge RWF, Tingali A, Verakis A, Willians EJ, van Hooft JE. Endoscopic management of common bile duct stones: Europaen Society of Gastrointestinal Endoscopy (ESGE) guideline. Endoscopy:2019:51(5): 472 – 490. https://doi.org/10.1055/a - 0862 - 0346.
24. Mc. Nicoll CF, Pastorino A, Farooq U, ST Hill CR. Choledocholithiasis. In: Stat Pearls [Internet]. Treasure Island (FL): Stat Pearls Publishing. 2022.PMID:28722990.
25. Masci E, Toti G, Mariani A, Curioni S, Lomarzi A. Dinelli M, Minoli G, Crosa C, Comin U, Fertitta A, Prada A, Passoni GR, Testoni PA. Complications of diagnostic and therapeutic ERCP: a prospective multi center Study American Journal of Gastroenterology. 2001:96 (2): 417 – 423. https://doi.org/10.1111/j.1572-0241-2001-03594-x.
26. Sahajpal AK, Chow SC, Dixon E, Greig PD, Gallinger S, Wei AC. Bile duct injuries associated with laparoscopic cholecystectomy: timing of repair and long – term outcomes. The Archives of Surgery. 2010:145 (8): 757 – 760. https://doi.org/10.1001/arch surg. 2010.153.
27. Strasberg SM, Brunt LM. Rationale and use of the critical view of safety in laparoscopic cholecystectomy. Journal of the American College of Surgeons. 2010:211 (1):132 – 137. https://doi.org/10.1016/j.jam collsurg.2010.02.053.
28. Schirmer BD, Winters KL, Edlich RF. Cholelithaisis and cholecystitis. J long Trem Eff Med Implants. 2005: 15 (3): 329 – 334. https://doi.org/10.1615/j longtremeffmedimplants. V 15:3 – 90.
29. Shojaiefard A, Esmaeilzadeh M, Ghafouri A, Mehrabi A, Various techniques for the surgical treatment of common bile duct stones: a meta review. Gastroenterolody Research and Practice. 2009:2009:840208. https://doi.org/10.1155/2009/840208.
30. Siiki A, Tamminen A, Kuusanmaki P, ERCP procedures in a Finish community hospital: a retrospective analysis of 1207 cases. Scandinavian Journal of Surgery. 2012:101(1):45 – 50. https://doi.org/10.117/145749691210 100109.
31. Wang L, Yu WF. Obstructive jaundice and perioperatice management. Acta Anaes the siologica Taiwanica. 2014:52(1):22 – 25. https://doi.org/10.1016/j.aat.2014.03.002.