

# Characteristics of Epidemiology and Prevention of Chronic Cholecystitis in the Geront and Supergeront Population of Uzbekistan

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**Abstract** The authors of this literature review analyzed the epidemiology and prevention features of chronic cholecystitis in the geront and supergeront population of Uzbekistan and showed the relevance and necessity of the topic. Among the total examined geront and supergeront population - 528 (non-stone type - 441 and stone type - 87) and chronic cholecystitis is confirmed depending on social risk factors in 6 appropriate ways (RR=0.836; 95% CI=0.433 - 1.613;  $\chi^2=0.265$ ; S=0.012; P>0.05). Under the influence of social risk factors, the risk of chronic cholecystitis in the geront population increases up to 29.9% and in the supergeront population - up to 33.3%. Implementation and implementation of appropriate preventive programs reduces the risk of disease by increasing medical effectiveness by 31.6%. The analytical results of the study confirm such a conclusion.

**Keywords** Chronic cholecystitis – CC

## 1. Relevance of the Problem

Due to the increase in the population of gerontological age, cholecystitis is increasing, mainly according to clinical data. For example, gerontological age make up 40% of cholecystitis patients admitted to emergency medical facilities [2,3,6]. Due to the almost absence of epidemiological studies, geront patients with cholecystitis in the geront and supergeront population caused life-threatening complications (reached 8-30%) and caused 8-12% death [1,5]. The main reason for this is that cholecystitis in this contingent of patients is often combined with pathologies of the cardiovascular system.

Even the success of minimally invasive surgery does not guarantee a reduction in postoperative mortality and complications. There is a need for this scientific approach in the Uzbek geront population, and this need will increase in the coming years [4].

## 2. Research Materials and Methods

This study is considered a simultaneous epidemiological investigation and it is based on the analysis of the results

obtained in a population of 2682 people. Residents of 5 regions of the country - Andijan, Namangan, Fergana, Jizzakh, and Kashkadarya were involved in the research. "A screening examination group (therapist, cardiologist, general practitioner, ophthalmologist, surgeon, specialists in preventive medicine) was established and the scientific team was prepared for a special epidemiological examination (qualification was increased and certificate was issued)".

The research organization system and idea was formed according to the criteria and requirements developed by the World Health Organization (WHO) for epidemiological investigations [WHO, 2018].

Based on the tasks set in the work, 5 simultaneous epidemiological studies were organized and carried out in the valley and oasis regions of Uzbekistan.

A detailed description of the organization and conduct of the epidemiological study was provided: the screening group was formed, questionnaires were prepared, and the screening group was introduced to the necessary equipment for the study. A procedure for working with the population was created and a procedure for checking the population was developed.

## 3. Results and Their Discussion

Features of epidemiology and prevention of chronic cholecystitis (CH) in the population of geront-supergeront

women and men of Uzbekistan. The epidemiological basis of SX prevention in the geront-supergeront population was studied and determined in 5 provinces and two regions of Uzbekistan (Andijan, Fergana, Namangan, Jizzakh, Kashkadarya, Fergana valley and Oasis region). In the population of geront and supergeront women, according to the territory of the Republic, chronic cholecystitis is characterized by the following detection frequencies: 1) in Andijan - 19.8% (non-stone type - 19.5% and stone type - 21.1%) and 50.0% (stone-free type - 50.0% and stony type - 0.00%) are consistent ( $RR=0.618$ ; 95%  $CI=0.148-2.583$ ;  $\chi^2=0.329$ ;  $S=0.068$ ;  $P>0.05$ ); 2) in Fergana - 42.4% (42.5% - stoneless type and 42.1% stone type) and 0.00% in geront and supergeront population, respectively; 3) In Namangan - 17.9% (stoneless type - 18.4% and stony type - 15.8%) and 50.0% (stoneless type - 50% and stony type - 0.00%) ( $RR=0.352$ ; 95%  $CI=0.505$ ;  $S=0.05$ ); 4) in Jizzakh - 17.9% (non-stone type - 19.5% and stone type - 10.5%) and 0.00%; 5) In Kashkadarya - 1.9% (non-stone type - 0.00% and stone type - 10.5%) and 0.00%.

In geront-women of the Fergana Valley, SX is confirmed with a prevalence of 80.2%, including its stoneless type - 19.5% and stone type - 78.9%. The prevalence of SX in the supergeront population of the valley is 100.0% (only for the stoneless type) ( $RR=0.488$ ; 95%  $CI=0.215-1.108$ ;  $\chi^2=1.561$ ;  $S=0.077$ ;  $P>0.05$ ).

The analysis of the population of Voxa proved that SX is not detected in the supergeront population and is confirmed only in 21 women of geront age with a prevalence of SX - 19.8%, SX without stones - 19.5% and SX with stones - 21.1%. The male population consisted only of geront-aged people (70), and the supergeront population was determined.

Chronic cholecystitis, its stone-free and stone-free types are confirmed by the following detection frequencies: in Andijan - 28.6% (stone-free SX - 30% and stone-free SX - 20.0%), in Fergana - 28.6% (stone-free SX - 30.0 % and SX with stones - from 20.0%), in Namangan - 11.4% (SX without stones - 11.7% and SX with stones - from 10.0%), in Jizzakh - 25.7% (SX without stones - 26.7 % and SX with stones - from 20.0%), in Kashkadarya - 4.3% (SX without stones - 1.7% and SX with stones - from 20.0%).

In the population of geront men of the Fergana Valley, chronic cholecystitis is determined with a prevalence of 68.6%, CKD without stones is confirmed in 71.7% and CKD with stones in 50.0%. In the population of geront men of the oases, SX is determined by the prevalence of 31.4%; SX without stones is confirmed in frequencies of 28.3% and SX with stones in 50.0%.

In the improvement of preventive programs, it is important to consider the following in order to prolong the life of long-lived people: 1) mainly stone-free SX is confirmed at high frequencies, posing a risk to the geront-supergeront population; 2) in supergeront and geront women, both with stones and without stones, chronic cholecystitis is detected with higher frequencies, compared to men, with spread and risks; 3) geront women and men of the valley, supergeront population are 4 times more sick with SX, and based on this,

it is considered appropriate to "target", plan and implement primary prevention in relation to SX.

Epidemiological description of chronic cholecystitis in the geront-supergeront population of Uzbekistan, the spread of social risk factors and the mechanisms of disease formation depending on them.

In the geront-sepergeront population, living in 5 regions of Uzbekistan, social risk factors that increase the risk of chronic cholecystitis and/or are directly related to the frequency of its spread were distinguished and the mechanisms of cholecystitis formation were described depending on them. It is proven from them that chronic cholecystitis is recorded in the frequency of 5.1% in the "geront population engaged in mental work". Stone-free and stone-free SX - 5.4% and 3.4% respectively. Undetectable in supergeront population (0.00%).

"In the geront population engaged in physical labor" chronic cholecystitis is characterized by the prevalence of 28.2%, 27.9% without stones and 29.9% with stones. In the supergeront population where SX is detected, its stoneless type is mainly recorded (33.3%) and the stone type is not detected (0.00%) ( $RR=0.272$ ; 95%  $CI=0.237-0.312$ ;  $\chi^2=5.304$ ;  $S=0.098$ ;  $P<0.05$ ).

Chronic cholecystitis is confirmed with a frequency of 20.2% in the geront population in "familial good condition", including stoneless and stone types - 20.2% and 20.7%, respectively. SX is undetectable in the supergeront population (0.00%).

In the geront population in "familial disadvantage" SX - 13.1% (from SX with stones - 12.1% and SX without stones - 13.1%) and in the supergeront population - from 33.3% (SX without stones - 33.3% and stony SX - from 0.00%) is confirmed by detection frequency ( $RR=0.484$ ; 95%  $CI=0.212-1.102$ ;  $\chi^2=1.593$ ;  $S=0.085$ ;  $P>0.05$ ).

The frequency of detection of SX in the "highly educated" geront population is 5.7%, its stoneless and stone types are confirmed at prevalence levels of 5.9% and 4.6%. SX is not detectable in the highly educated supergeront population. The frequency of detection of chronic cholecystitis in the "low-educated geront and supergeront population" is 27.6% (27.4% of stone-free SX and 28.7% of stone-free SX) and 33.3% (stone-free SX - 33.3%) respectively. and stony type - from 0.00%) are observed with indicators ( $RR=0.218$ ; 95%  $CI=0.186-0.255$ ;  $\chi^2=7.099$ ;  $S=0.112$ ;  $P<0.05$ ).

## 4. Summary

Chronic cholecystitis was confirmed among the total examined geront and supergeront population - 528 (non-stone type - 441 and stone type - 87) and 5 correspondingly depending on social risk factors ( $RR=0.836$ ; 95%  $CI=0.433-1.613$ ;  $\chi^2=0.265$ ;  $S=0.012$ ;  $P>0.05$ ). Under the influence of social risk factors, the risk of developing chronic cholecystitis in the geront population increases up to 29.9% and in the supergeront population - up to 33.3%. Implementation and implementation of appropriate preventive programs reduces the risk of disease by increasing medical effectiveness by

31.6%. The analytical results of the study confirm such a conclusion.

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