

A MODERN VIEW ON PRENOSOLOGICAL DIAGNOSTICS, PREVENTION AND OPTIMIZATION OF TREATMENT OF CHOLELITHIASIS AMONG THE POPULATION OF THE GERONTOLOGICAL GROUP

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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 for cholelithiasis in 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.

Introduction

In the modern world, diseases of the hepatobiliary tract, namely cholelithiasis among the gerontological group population, are one of the most pressing problems in medicine, and timely diagnosis, prevention and timely treatment are of great importance for maintaining an active healthy lifestyle in this contingent.

The existing modern clinical, fundamental-applied and review studies present modern foreign and domestic data on the problem of prevalence, prevention and treatment of cholelithiasis.

The analysis of population studies and preventive programs of cholelithiasis in the population of the geronto-geriatric group is conducted. Researchers, both foreign and domestic, consider modern recommendations for the use of screening, various types of preventive studies, conservative and surgical methods of treating cholelithiasis.

Modern aspects of early diagnostics, rational prevention and treatment of cholelithiasis in persons of the gerontological group (75 - 90 years and above) remain one of the most difficult to solve not only in clinical, but also in preventive surgery. It should be noted that an effective step forward was the use of screening, various methods of preventive medicine and



pharmacoepidemiological monitoring in solving the problem of cholelithiasis (GSD), especially at the level of the elderly population. However, such data in modern literature are few and far between, and contradictory [8, 14, 22].

In the modern treatment and diagnostic process of cholelithiasis, it is important, especially in persons of the gerontological group (PG), not only to provide scientific information about a certain type of treatment (surgical or conservative) and clinical and fundamental recommendations, but also to acquire modern innovative technologies applicable to preventive surgery and the ability to use them [30]. For the advanced development of cholelithiasis surgery in the 21st century, it is important to identify the most susceptible individuals with high or very high risk for this pathology and their special prevention to ensure the process of early detection, effective (safe) treatment and prevention of not only cholelithiasis itself, but also formidable complications of cholecystectomy, cholecystostomy, choledochotomy, choledocholithotomy, transduodenal sphincterotomy [34,52].

In stimulating scientific research on the development of new surgical technologies for cholelithiasis, it is necessary to determine, on the one hand, the role of observations and experiments, and on the other hand, the role of risk factors (especially behavioral), contributing to and hindering the achievement of a positive goal. As world experience shows, such an approach will allow the formation of scientifically based prevention of cholelithiasis or low level of life expectancy for Uzbekistan is mainly associated with high mortality from non-communicable diseases, significantly exceeding that among the population of the CIS and other countries [1, 2].

In this last, but not the least significant aspect of surgical science or activity, a fairly clear and promising goal emerges, which is most often associated with the development of not only today's but also future "new" surgery, detection of surgical pathologies in the pre-clinical stage of development, stimulation of motivation and formation of skills of scientific activity in this direction [23, 24, 12] formation of scientific personnel, specialists or how to grow flowers these are the popular issues of preventive surgery, which become the main motivator for conducting scientific research. For example, in the example of remote results of cholecystectomy in elderly and senile patients, according to Rybachkov V.V. et al. (2015), one can be convinced of the demand for a preventive direction in surgery. The authors presented examinations of 127 patients in the remote period after cholecystectomy. It has been established that with increasing time since the operation, pathological changes in the pancreas, stomach and duodenum increase. An imbalance in the ratio of bile acids in the blood plasma, an increase in intraluminal pressure in the upper gastrointestinal tract (GIT), an increase in the size of the pancreas and dilation of the Wirsung duct have been identified. All this, apparently, leads to the development of postcholecystectomy syndrome, which requires correction at the pre-clinical (pre-operative) stage, primarily using preventive approaches [25].

It should be emphasized that the frequency of cholecystectomy increases every year [4, 12, 48]. Most importantly, its results are still uncertain [15]. According to the literature, 10-30% of patients after gallbladder removal have postcholecystectomy syndrome, in the development of



which not only organic changes, mainly in the form of choledocholithiasis, but also functional ones are of priority importance. According to many researchers, the latter are decisive in most cases, but their pathogenesis, unfortunately, cannot be considered studied to date. Epidemiological studies are required to clarify this issue and the insufficiently studied scientific direction of screening [20, 21, 51].

The fact is that in recent years, the healthcare system, in the practice of identifying and correcting their risk factors among the population, has been paying increasing attention. Such a preventive strategy has repeatedly confirmed its effectiveness in a number of countries around the world and has led to a decrease in mortality from chronic non-communicable diseases (CNCD) [41, 42, 43, 44].

However, it should be noted that to this day insufficient attention has been paid to the primary prevention of surgical diseases in general, and hepatobiliary pathologies in particular. As a result, complicated surgical pathologies with unfavorable outcomes increasingly often lead to hospitalization of patients in the geronto-geriatric group with a high frequency of complications (up to 60%) of all patients in general surgery departments of emergency hospitals are patients with exacerbation of cholelithiasis [50]. Obviously, the problem of late diagnosis is of particular importance in cholelithiasis, especially among the gerontological population. Cholelithiasis is often characterized by an asymptomatic course (20–30%), in 35% of cases a complicated course develops and indications for cholecystectomy arise [9, 19].

Gallstone disease is the most frequent cause of emergency surgery, and the rate of its diagnosis doubles every 10 years [13]. In some regions of the world, it has increased by an average of 44% in the last 10 years, and naturally, early diagnostics of gallstone disease at an early stage is of great importance for the purpose of differentiated treatment and prevention of risk factors for its development. This has become possible due to the use of various types of epidemiological studies and prevention methods (cross-sectional and prospective epidemiological studies among the population, pharmacoepidemiological studies of primary and secondary prevention), which allow for effective treatment of the disease without surgery, as well as monitoring, for example, gallstone disease at the population level: 1) "Conditionally healthy", 2) "Group without gallstone disease", 3) "Groups of patients with gallstone disease without comorbid background" 4) "Groups of persons with multiple risk factors", 5) "Groups of patients with gallstone disease against the background of comorbidity".

All this encourages early diagnosis of cholelithiasis and its risk factors by conducting population-based selective studies of the population of Uzbekistan.

The listed issues and problems are often established in persons of the geronto-geriatric group. Most likely, at present, the increase in postoperative or surgical mortality in patients with cholelithiasis is associated with insufficient efficiency of screening and primary prevention programs among the population in relation to this pathology. The study of risk factors, clinical and laboratory features of prevalence and regional aspects of preventive strategies for cholelithiasis among the elderly and senile population (geronto-geriatric population), as well



as among long-livers in Uzbekistan can be considered as a practically unexplored promising direction not only of surgical or preventive science, but also of revitalization.

Interest in this problem is not so much due to the frequency of this disease (according to WHO, gallstones affect a quarter of the population starting at 60 years of age and a third of the population over 70 years of age), but rather the frequency of its complications, which are observed from 53 to 100%, that is, in almost every patient, which in turn leads to high mortality rates [35].

In recent years, studies have widely presented data on the analysis of the results of postoperative complications and mortality when using the recommended algorithm for decompression of the biliary tract in patients with cholelithiasis and mechanical jaundice, most of whom are people of the gerontological group, liver and kidney dysfunction, coagulopathy, cholemic bleeding, purulent cholangitis, liver abscesses and multiple organ failure often occur [16, 5, 49, 37]. In such a clinical situation, in 48 - 82% of cases, the severity of the condition of patients with cholelithiasis does not allow immediate surgical (radical) intervention [26].

Thus, operations for cholelithiasis and/or bile ducts are not always accompanied by a pronounced positive effect [10]. And cholelithiasis is one of the most common gastrointestinal diseases, the prevalence of which reaches 35% and depends on gender, age, genetic and environmental factors [11, 29, 45, 38, 40]. Therefore, in the non-surgical environment, voices are increasingly heard in favor of other methods of early diagnosis and prevention of cholelithiasis development [33, 36]. Risk factors, comorbid conditions, inadequate therapeutic tactics and, above all, practically forgotten scientifically based prevention are "to blame" for the increase in cholelithiasis and/or the number of cholecystectomies.

Conducting anterior cholecystectomy leads to the development of such a postoperative complication as postcholecystectomy syndrome (PCS) [46, 3, 2]. According to researchers, complaints of pain among patients who have undergone cholecystectomy and continue to receive treatment from specialists are recorded in 5–90% of patients [17, 31, 39].

It seems to us that the speed of creating new and more advanced diagnostic methods is far ahead of the skills of surgeons to analyze what is happening and, as modern researchers claim, to change established canons if necessary [27, 28]. Consequently, the issues of screening detection and early prevention of cholelithiasis in certain population groups, especially the elderly and senile, and/or in certain regions of the world are becoming more pressing. Unfavorable epidemiological conditions for cholelithiasis persist, namely:

- this pathology is one of the common urgent surgical diseases of the abdominal organs [6];
- currently, cholelithiasis occurs in more than 10% of the world's population [206, 208].
- the most common complications of cholelithiasis are acute calculous cholecystitis (15 - 20%) and choledocholithiasis (15 - 35%) [6, 32];
- in this case, choledocholithiasis in 80 - 85% of patients is complicated by mechanical jaundice, which persists at the time of surgery in 40% of patients [5];



- surgical treatment of cholelithiasis with mechanical jaundice is accompanied by high mortality - from 10 to 28%, and in emergency operations in elderly patients it exceeds 40 - 50% [47].

In general, dissatisfaction with the results of surgical treatment of patients with acute cholecystitis complicated by choledocholithiasis and mechanical jaundice makes the problem of not only increasing the effectiveness of treatment, but also timely, active prevention urgent [14]. On the other hand, the widespread prevalence of cholelithiasis and the increase in the number of its complications, the increase in the proportion of elderly and senile patients against the background of high rates of postoperative complications and mortality determine the medical, social and economic significance of this problem [7, 18].

The noted facts once again convincingly emphasize that despite the significant progress achieved in recent years in the treatment of severe stages of cholelithiasis, the majority of surgeons are not satisfied with the results of surgical interventions, especially in elderly patients with a high degree of anesthetic and surgical risk. Given this situation, the modern development of surgical hepatology requires the use of various methods of preventive medicine for detection, prevention and treatment in the preclinical pre-stone period of cholelithiasis. Active and widespread introduction of new advanced screening and preventive technologies into surgical clinical practice opens up undoubted prospects for effective prevention and successful surgical treatment of patients with cholelithiasis. However, the available literature does not yet contain a sufficient number of epidemiological and preventive studies of adequate quality to make scientific recommendations regarding cholelithiasis in planned, urgent and preventive surgery. For this reason, cholelithiasis is still an extremely common disease and the number of patients with complicated forms of cholelithiasis remains consistently high.

Conclusion

In the formation of "aggressive" epidemiological conditions in relation to cholelithiasis among the gerontologically aged population of the Fergana Valley, exogenous and endogenous common factors play a key role. They are characterized by the following prevalence rates in men and women ($\geq 60-90$ years), respectively: arterial hypertension - 42.1% and 57.9%, alcohol consumption - 98.4% and 1.6%, low consumption of vegetables and fruits - 39.8% and 60.2%, type 2 diabetes mellitus - 41.9% and 58.1%, overweight - 42.5% and 57.5%, obesity - 41.7% and 58.3%, burdened heredity - 52.8% and 47.2%, cirrhosis of the liver - 42.9% and 57.1%.

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