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SURGICAL TREATMENT OF CHD IN ELDERLY AND SENILE AGE.

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The article analyzes results of examination and surgical treatment of 543 patients with coronary heart disease in the age group over 65 years. Somatic condition of patients was about 3-5 points of the European system of risk assessment of surgical intervention. 356 patients underwent isolated myocardial revascularization. 187 patients underwent combined myocardial revascularization and correction of comorbidities. Hospital mortality was about 3.2 % and allowed to expand the indications for surgical treatment of coronary artery disease in this group of patients.

Key words *. Coronary heart disease, myocardial revascularization, combined surgery*

In recent decades there is a significant change in the structure of the population in the majority of countries which is due to increased number of elderly people. Growth rate of this group surpasses increase in population as a whole.

Nowadays there are more than 600 million people in the age over 65 years in the world. If the total population grows by 1.7 % per year, population aged over 65 years will increase by 2.5 % per year and will achieve 7.5 % in developing countries, while in developed countries it will achieve about 18.3 % of the total population. According to the projection these figures will increase significantly in the future and will be of 11.9 % and 23.6 % respectively in 2025. Growth of aged and senile population in modern society determines necessity to maintain level of activity of elderly people and to provide necessary medical assistance. As known, the most common cause of morbidity and mortality in this age group are cardiovascular diseases [2,3]. One should notice that coronary heart disease (CHD) remains the most common abnormality of heart in Ukraine representing 67.5 % of all causes of death from cardiovascular diseases [4]. It is assumed that cardiovascular diseases will remain the leading cause of death and morbidity in the world by 2020. That is why the treatment of coronary artery disease is one of the most important medical problems of the XXI century. [5]

Coronary artery bypass surgery is the most effective and long-lasting (in terms of favorable remote results) therapy among the existing methods of treatment for serious forms of coronary heart disease [6,7]. However, the complexity of the surgical treatment of coronary heart disease of elderly patients, is caused by multifocal atherosclerosis and concomitant polymorbidity.

Purpose of the study is to explore immediate results and examine the clinical efficacy of surgical treatment of coronary heart disease in patients of elderly and senile age.

Materials and methods

During the period from January 2012 to December 2013 543 CHD patients aged over 65 years were examined and operated in state institution "Heart Institute of the Ministry of Health Protection of Ukraine" (Kiev). The study includes patients somatic condition of whom was about 3-5 points according to the European system of risk assessment of surgical intervention for patients with coronary artery disease.

112 patients (20,6%) had exertional angina of II functional class (FC), 351 patients (64,7%) had III FC, 36 patients (6.7%) had IV FC, 18 patients (3.4%) had unstable angina and 26 patients (4.7%) had early postinfarction angina.

In order to identify operational risk patients anamnestic data was collected, laboratory and instrumental methods were used. Instrumental studies were as follows: electrocardiography in 12 standard leads , echocardiography, ultrasound scan of brain vessels (angiography if necessary), coronary ventriculography, chest X-ray , ultrasound scanning of veins of the lower extremities , gastroscopy, ultrasound of the abdominal cavity.

In the preoperative period risk stratificationand treatment of comorbidities were conducted. Endovascular techniques were widely used: 54 patients underwent renal artery stenting, 32 patients underwent stenting of the great arteries supplying the brain, 12 patients underwent lower limb arteries stenting.

Surgical strategy was directed to bypass all available arteries for coronary revascularization (including diameter of 1.0 - 1.5 mm).

Performed surgical procedures are described in table 1 .

Table 1. Results of operations performed in patients of the study group (N = 543).

Type of conducted operations	Number of performed operations
Isolated coronary artery bypass grafting	281 (51.7%)
Coronary artery bypass grafting + mammary coronary bypass	75 (13.8%)
Coronary artery bypass +resection/ left ventricular aneurysmoplasty	94 (17.3%)
Coronary artery bypass surgery on a beating heart (offpump)	98 (22.1%)
Coronary artery/ mammary coronary bypass + valve replacement	95 (38.8%)
mammary coronary bypass+ valvuloplasty	167 (46.5%)

Results and discussion

According to the survey the patients had accompanying somatic diseases presented in Table 2.

Table 2. Characteristics of related somatic diseases the patients of the surveyed group (N = 543)

Disease	Number of patients with the disease
Hypertensive heart disease I - III stage	497 (91.7%)
Valves pathology	187 (34.4%)
Carotid arteries disease	74 (13.6%)
Lower extremity Artery Disease	54 (10%)
Dyscirculatory encephalopathy	156 (28.8%)
A history of acute cerebrovascular disease	46 (8.4%)
Diabetes mellitus	121 (22.3%)
Obesity	95 (17.5%)

Chronic kidney disease	75 (13.8%)
Chronic obstructive pulmonary disease	36 (7.1%)
Lower extremity vein disease	114 (21%)

The major complications of early postoperative period were: arrhythmias - 94 patients (17.4%) , acute left ventricular failure - 48 patients (8.8%) , pneumonia - 38 patients (7%), neurological complications - 14 patients (2.6%). 17 patients (2.3%) underwent postoperative mortality.

All patients involved in the study underwent the most "complete" revascularization with arterial conduits and autovenous . As arterial conduit internal thoracic artery (13.8 %) was used. Average number of grafts per patient was 3.2 ± 0.5. In the presence of post-infarction left ventricular aneurysm, valvular heart disease, patients underwent combined operations amounted to 34.4 % of total number of patients. Particular attention was paid to postoperative rehabilitation treatment that started right after extubation of patients in the ICU: breathing exercises, vibratory chest, early mobilization. Integrated approach to the diagnosis and treatment of elderly patients CHD, rehabilitation measures helped to reduce the average time of stay of patients in the intensive care unit to 2,7 ± 2 days and postoperative period of stay in the hospital was reduced to 7.3 ± 2,6 days. Thus surgical treatment allows to get immediate positive results of direct myocardial revascularization and expand contingent CHD patients of older age groups, which may undergo operative treatment with minimal risk of complications and postoperative mortality.

1.The main clinical feature of elderly patients coronary artery disease is generalized atherosclerotic process , combined with a long history of the underlying disease and the presence of various comorbidities .

2. Patients older than 65 years before surgery should be carefully screened to reduce the risk of complications and mortality in the postoperative period .

3. Presence of comorbidities such as diabetes, chronic obstructive pulmonary disease, chronic renal failure, atherosclerosis other vascular beds significantly increase risk of postoperative complications and hospital mortality. However early diagnosis and correction allow to minimize risks and prevent the development of postoperative complications.

4. Old age should not be considered a contraindication for myocardial revascularization because long-term benefits and improved quality of life outweigh the risk of surgery.

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ХІРУРГІЧНЕ ЛІКУВАННЯ ІШЕМІЧНОЇ ХВОРОБИ СЕРЦЯ У ХВОРИХ ПОХИЛОГО І СТАРЕЧОГО ВІКУ

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У статті проаналізовано результати обстеження і хірургічного лікування 543 пацієнтів з ішемічною хворобою серця у віковій групі старше 65

років. Соматичний стан пацієнтів відповідав 3–5 балам за Європейською системою оцінки ризику оперативного втручання. 356 пацієнтам була виконана ізольована реваскуляризація міокарда. 187 пацієнтам виконані комбіновані операції реваскуляризації міокарда та корекції супутньої патології. Госпітальна летальність склала 3,2%, що дозволяє розширити показання до хірургічного лікування ІХС у цієї групи хворих.

***Ключові слова**: ішемічна хвороба серця, реваскуляризація міокарда, комбіновані оперативні втручання*

ХИРУРГИЧЕСКОЕ ЛЕЧЕНИЕ ИШЕМИЧЕСКОЙ БОЛЕЗНИ СЕРДЦА У БОЛЬНЫХ ПОЖИЛОГО И СТАРЧЕСКОГО ВОЗРАСТА

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В статье проанализированы результаты обследования и хирургического лечения 543 пациентов с ишемической болезнью сердца в возрастной группе старше 65 лет. Соматическое состояние пациентов отвечало 3–5 баллам по Европейской системе оценки риска оперативного вмешательства. 356 пациентам была выполнена изолированная реваскуляризация миокарда. 187 пациентам выполнены комбинированные операции реваскуляризация миокарда и коррекции сопутствующей патологии. Госпитальная летальность составила 3,2%.

Ключевые слова: ишемическая болезнь сердца, реваскуляризация миокарда, комбинированные оперативные вмешательства