CARDIAC SURGERY IN OCTOGENARIANS IN ALBANIA

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Abstract

Introduction: For many years, surgical treatment of cardiac pathologies in subjects over 80 years of age has been viewed with great skepticism. Old age as a significant risk factor for cardiovascular diseases has also been considered an indicator of high surgical risk, being influenced by the progressive increase in comorbidities with increasing age. However, with the increase in quality of life and at the same time average life expectancy, an ever-increasing trend has been observed in patients over 80 years of age who have shown the need for cardiac surgical treatment.

Methods: In this retrospective study based on hospital registry data, we analyzed all patients over 80 years of age who were hospitalized in the cardiac surgery service in the period January 2021-December 2024 with a focus on the short-term results of surgical treatment, mortality and morbidity. Patients who, after evaluation by the cardiosurgical and cardio-anesthetic medical staff, were considered inoperable were excluded from the study.

Results: During the 4-year study period, 3001 patients were hospitalized in the Cardiac Surgery Service, of whom 80 patients were over 80 years old. 18 patients considered inoperable were excluded from the study. Of the 62 patients in the study, 25 were female and 37 were male. The average age was 81.46 years old (minimum 80, maximum 86). Hospitalization of patients was in emergency n=3 patients and elective in n=59 patients. The interventions performed in these patients were simple (n=50): CABG (n=30); AVR (n=13); MVR (n=4); Mitral Valve Plastic (n=1); AAR(n=2); and complex n=12 such as: AVR and CABG (n=6); MVR and CABG (n=2); Mitral Valve Plastic and CABG (n=1); AVR and MVR and ASD Closure (n=1); AVR and AAR (n=1); CABG and ASD Closure (n=1);. The average length of stay of these patients in the cardiac surgery service was 14.5 days (minimum 1 day, maximum 40 days). The postoperative course was without complications in most patients. Postoperative mortality during this period was 8 %. All patients were discharged in improved clinical condition, NYHA II-III functional class.

Conclusions: Although age is a significant indicator of increased morbidity and hospital stay in patients suffering from cardiac pathology and consequently undergoing cardiac surgery, it does not result in a significant factor of mortality in these patients. On the other hand, it results that cardiac surgery in these patients has brought significant improvement in clinical condition and quality of life. Based on the ever-increasing presentation of these patients in hospital clinics seeking treatment for these pathologies, cardiac surgery is considered a relatively safe definitive treatment method with good results.

Keywords: cardiac, surgery, high risk, octogenarians

KIRURGJIA KARDIAKE GJATË TË TETËDHJETAVE NË SHQIPËRI

Abstrakt

Hyrje; Prej shumë vitesh, trajtimi kirurgjikal i patologjive kardiake te subjektet mbi 80 vjeç është parë me shumë skepticizëm. Mosha e madhe, si një faktor rrisku i rëndësishëm për sëmundjet

kardiovaskulare, është konsideruar gjithashtu dhe si një tregues i rriskut të lartë kirurgjikal, duke u influencuar nga rritja progresive e sëmundjeve bashkeshoqëruese me rritjen e moshës. Megjithatë, me rritjen e cilësisë së jetës dhe në të njëjtën kohë dhe e jetëgjatësisë mesatare, është vënë re një tendencë gjithnjë në rritje e pacientëve mbi 80 vjeç, të cilët kanë shfaqur nevojën e trajtimit kardiokirurgjikal.
Metodat: Në këtë studim retrospektiv bazuar në të dhënat e regjistrit spitalor, ne analizuam të gjithë pacientët mbi 80 vjeç të shtruar në shërbimin e kardiokirurgjisë në periudhën janar 2021-dhjetor 2024 me fokus në rezultatet afatshkurtra të trajtimit kirurgjikal, vdekshmërisë dhe sëmundshmërisë. Pacientët të cilët, pas vlerësimit nga stafi mjekësor kardiokirurgjikal dhe kardio-anestetik, u konsideruan të paoperueshëm, u përjashtuan nga studimi.
Rezultatet: Gjatë periudhës 4-vjeçare të studimit, në Shërbimin e Kardiokirurgjisë janë shtruar 3001 pacientë, nga të cilët 80 pacientë ishin mbi 80 vjeç. 18 pacientë të konsideruar inoperabel u përjashtuan nga studimi. Nga 62 pacientët në studim, 25 ishin femra dhe 37 ishin meshkuj. Mosha mesatare ishte 81.46 vjeç (minimumi 80, maksimumi 86). Hospitalizimi i pacientëve ishte në urgjencë n=3 pacientë dhe elektiv në n=59 pacientë. Ndërhyrjet e kryera në këta pacientë ishin të thjeshta (n=50): CABG (n=30); ZVA (n=13); ZVM (n=4); Plastike e Valvulës Mitrale (n=1); ZvAoAsc (n=2); dhe komplekse n=12 si: ZVA dhe CABG (n=6); ZVM dhe CABG (n=2); Plastike e valvules mitrale dhe CABG (n=1); ZVA, ZVM dhe Mbyllje e DIA (n=1); ZVA dhe ZvAoAsc (n=1); CABG dhe Mbyllje e DIA (n=1);. Kohëzgjatja mesatare e qëndrimit të këtyre pacientëve në shërbimin e kardiokirurgjisë ishte 14.5 ditë (minimumi 1 ditë, maksimumi 40 ditë). Ecuria postoperative ishte pa komplikime në shumicën e pacientëve. Vdekshmëria pas operacionit gjatë kësaj periudhe ishte 8 %. Të gjithë pacientët dolen nga spitali në gjendje të përmirësuar klinike, me funksion kardiak NYHA II-III.
Konkluzione: Edhe pse mosha është një tregues domethënës i rritjes së sëmundshmërisë dhe qëndrimit në spital në pacientët që vuajnë nga patologjia kardiake dhe për pasojë që i nënshtrohen kardiokirurgjisë, ajo nuk rezulton në një faktor të rëndësishëm vdekshmërie tek këta pacientë. Nga ana tjetër rezulton se kardiokirurgjia tek këta pacientë ka sjellë përmirësim të ndjeshëm në gjendjen klinike dhe cilësinë e jetës. Bazuar në paraqitjen gjithnjë në rritje të këtyre pacientëve në klinikat spitalore që kërkojnë trajtim për këto patologji, kardiokirurgjia konsiderohet një metodë trajtimi përfundimtare relativisht e sigurt dhe me rezultate të mira.

Fjalë kyçe: kardiak, kirurgji, rrezik i lartë, tetëvjeçarë

Introduction

Age is an important factor of cardiovascular function deterioration, increasing the risk of cardiovascular disease (CVD) in older people (1). Along with atherosclerosis, stroke, and myocardial infarction, CVD prevalence increases with age in both men and women. The American Heart Association AHA indicates that CVD incidence in US men and women is ~40% from 40-59 years, ~75% from 60-79 years, and ~86% beyond 80 years (2).
Most algorithms employed to assess the cardiac surgical risk indicate that octogenarians consistently receive high scores for estimated mortality risk due to age and co-morbidity factors. Therefore, for a long time this has resulted in challenges in consultation and hesitation in both offering and accepting the surgical treatment (3).

Methods

We designed the following retrospective study assessing the outcome of cardiac surgical treatment in octogenarians presented to our clinic. Based on hospital registry data, we analyzed all patients over 80 years of age who were hospitalized in the cardiac surgery clinic in the period January 2021-December 2024, excluding the patients considered inoperable from the cardiosurgical and

cardio-anesthetic medical staff and the patients denying consent for the surgical intervention. The patients undergoing cardiac surgery were classified according to age, gender, mode of admission, diagnosis, complexity of the intervention, length of hospital stay, postoperative course, and postoperative mortality.

Results

During the 4-year study period, 3001 patients were hospitalized in the Cardiac Surgery Service, of which 80 patients (2,7%) were over 80 years old. 18 patients, considered inoperable from the cardio-surgical and cardio-anesthetic teams or not willing to undergo such indicated surgery, were excluded from the study. Of the 62 patients in the study, 25 (40%) were female and 37 (60%) were male. The average age was 81,46 years (minimum 80, maximum 86). Hospitalization of patients was in emergency n=3 patients and elective in n=59 patients. The interventions performed in these patients were simple (n=50): CABG (n=30); AVR (n=13); MVR (n=4); Mitral Valve Plasty (n=1); AAR(n=2); others and complex n=12 such as: AVR and CABG (n=6); MVR and CABG (n=2); Mitral Valve Plastic and CABG (n=1); AVR and MVR and ASD Closure (n=1); AVR and AAR (n=1); CABG and ASD Closure (n=1);.

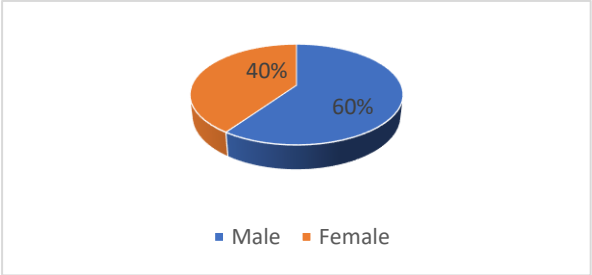

Figure 1. Division of the patients according to sex

Simple Surgery	**No of Patients**
CABG	30
AVR	13
MVR	4
MVP	1
AAR	2
Combined Surgery	
CABG+AVR	6
CABG+MVR	2
CABG+MVP	1
AVR+MVR+ASD	1
AVR+AAR	1
CABG+VSD	1

Table1. Type of operations CABG coronary artery bypass grafting, AVR aortic valve replacement, MVR mitral valve replacement, MVP mitral valve plastiy, AAR ascending aorta replacement, ASD atrial septal defect, VSD ventricular septal defect.

CABG No of grafts	Patients No(percentage)
1	1(1,9%)
2	17(32,7%)
3	10(19,2%)
4	2(3,8%)

Table 2. Number of the grafts during coronary bypass surgery

In surgical cases of valve replacement, all the patients received a biological prostheses Epic St Jude Medical either mitral in 7 patients or aortic17 patients.
One patient was re-operated for pericardial tamponade by opening a pleuro-pericardial window in thoracotomy and another one for sternal dehiscence with reconstruction of the wound. The average length of stay of these patients in the cardiac surgery service was 14.5 days (minimum 1 day, maximum 40 days). The postoperative course was uneventful in most patients.
The postoperative mortality during this period was 8 %. 5 patients with fatal postoperative events were recorded (intraoperative n=0, first postoperative day n=1, first postoperative week n=2, first postoperative month n=2). All the patients who survived, were discharged from the hospital with significant improvement in clinical condition, marking NYHA II and II-III heart failure, along with the other comorbidities.

Discussions

In Albania, coronary artery diseases alone, contribute to 40% of the national mortality. According to INSTAT (Institute of Statistics in Albania), there were 11,500 deaths from these diseases in 2015 and approximately 11,000 deaths in 2016.
Due to the aging of the population, but also the increase in life expectancy, the number of citizens older than 80 years, in Albania has more than doubled the last two decades according to INSTAT data in 2020 (their number was around 82.000 compared to 38.000 people over 80 years old in 2001). Seniors over 80 accounted for 2.9% of the total population in 2020, up from 1.3% in 2011. About 53% of them are women, for the reason that women live on average 3-4 years longer than men.

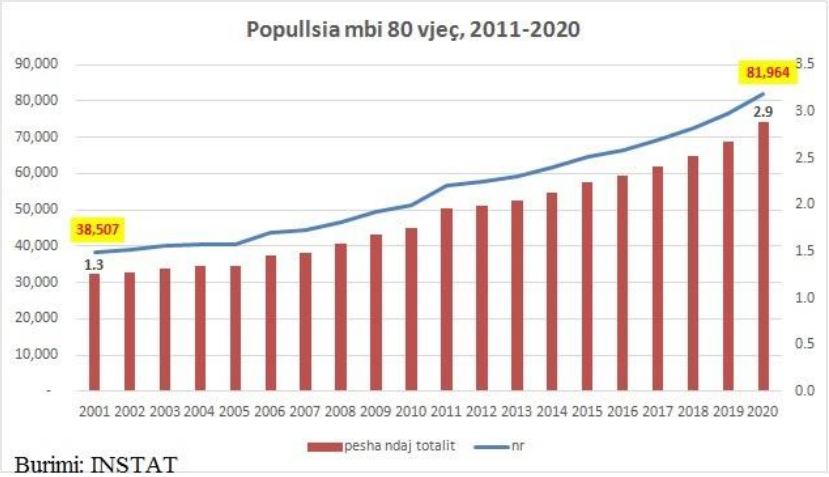

Figure 2. Population over 80 years old increase during the last 20 years in Albania Institute of Statistics in Albania INSTAT

As a result, during the last decade, the number of older patients needing heart surgery has progressively increased. Octogenarians have a particularly challenging place because of their

specific age-related physiology, various comorbidities, and exposure to complex chronic medications. These lead to a decompensated condition of general health. Cardiovascular disease, in particular, is the cause for the decline in the overall health of octogenarians (4).

The recent years our clinic has met a notable increase in the number of patients over 80 years old needing cardiac surgery. There are concerns and hesitation among patients, their family but also the medical team whether to operate this group of people or not. They represent only 2% of the total patients operated in the cardiac surgery clinic compared with 11% of patients undergoing adult cardiac surgery by the end of the 15-year study published by Jones et al about the situation in the United Kingdom. During this period, they observed almost a three-fold increase from the start of it (5). So, we must predict also a furthermore increase in the number of patients over 80 years to be operated in the following years in Albania.
Most of the octogenarians (around 80 %) needing cardiac surgery at the public hospital were operated with good results after careful selection by a dedicated cardio-surgical team. The hospital mortality, as the main indicator of the surgical outcome was 8%. It is almost the double of the overall mortality of 3-4 %, which is a well-established result at our clinic from many years, but it is an excellent result for this group of patients compared with other reports from different groups in Europe (3,5).
Stoica et al reports an in-hospital mortality rate of 3.9% for all patients and 9.8% for octogenarians (predicted 14.1%). Long bypass time and non-elective surgery were identified as risk factor for death above the Euro-SCORE prediction in both groups (3).
Postoperatively, a greater proportion of patients stayed in intensive care more than 48 hours as it is the general protocol for our clinic but it is comprehensible and does not affect the outcome, although it resulted in higher costs and demands in the intensive care unit and ward, reflected by a high median hospital stay for these patients.
Long term survival is significantly better, as reported in different studies with octogenarians, than in a general population with the same age–sex distribution (3,5). We have to follow this group of patients and have a clear panorama of intermediate and long-term results in order to confirm the present suggestion for surgery in this group of patients presenting at our public hospital.

Conclusions

Although age is a significant indicator of increased morbidity and hospital stay in patients suffering from cardiac pathology and consequently undergoing cardiac surgery, it does not result in a significant factor of mortality in these patients. On the other hand, it results that cardiac surgery in these patients has brought significant improvement in clinical condition and quality of life. Based on the ever-increasing presentation of these patients in hospital clinics seeking treatment for these pathologies, cardiac surgery is considered a relatively safe definitive treatment method with good results.

Conflict of interest: Nothing to declare

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