Ambulantna kardiovaskularna rehabilitacija nakon operacije aortne valvule: hrvatsko iskustvo

Outpatient cardiovascular rehabilitation after aortic valve surgery: Croatian experience

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ORCID: Kristina Narančić Skorić, http://orcid.org/0000-0002-3888-4804 · Mario Ivanuša, http://orcid.org/0000-0002-6426-6831 Jadranka Dražić-Balov, http://orcid.org/0000-0001-8804-1357 · Žaklina Muminović, http://orcid.org/0000-0001-6037-7537

Uvod: I dok su dobrobiti kardiovaskularne rehabilitacije (KVR) nakon kardiokirurške revaskularizacije miokarda dobro dokumentirane, tek je nekoliko studija ukazalo na korisnost KVR u bolesnika nakon operacije aortne valvule.[1,2] Cilj rada je prikazati iskustva jedinog hrvatskog centra ambulantne KVR kod bolesnika nakon operacije aortne valvule.

Pacijenti i metode: Retrospektivno smo iz povijesti bolesti analizirali podatke svih bolesnika s operiranom aortnom valvulom uključenih u program ambulantne KVR u Poliklinici za prevenciju kardiovaskularnih bolesti i rehabilitaciju u Zagrebu od 10. 1. 2012., a koji su završili sudjelovanje do 6. 10. 2016. godine. Provođenje programa KVR u Poliklinici već je opisano.[3] Uz podatke o vrsti zahvata i čimbenicima rizika analizirali smo učestalost optimalno provedene antikoagulantne terapije[4] te promjene funkcijskog kapaciteta na kraju KVR. Rezultati su prikazani u skupinama prema spolu metodama deskriptivne statistike.

Rezultati: Od 53 uključenih pacijenata, 18 (34%) su bile žene, a 35 (66%) muškarci. Prosječno trajanje KVR je bilo 2,6 mjeseci. Vodeća bolest je aortna stenoza, koja je bila prisutna u 80% muškaraca i 89% žena. Analiza učestalosti učinjenih zahvata, čimbenika rizika te uspješnosti antikoagulantnog liječenja prikazana je u **tablici 1**. Srednja vrijednost funkcijskog kapaciteta na početku i kraju KVR iznosila je 5,9±1,39 i 6,8±1,17 za muškarce te 5,6±0,85 i 6,4±1,12 METs-a za žene.

Zaključci: U program ambulantne KVR nakon operacije aortne valvule uključuju se češće muškarci. Dominantna bolest je aortna stenoza, a od čimbenika rizika arterijska hipertenzija, dislipidemija i povišen indeks tjelesne mase. Češće su bili uključeni bolesnici s implantiranom bioprostetičkom valvulom. Kod polovice ispitanika antikoagulantno liječenje je bilo optimalno. Program KVR nakon operacije zamjene aortne valvule poboljšava funkcijski kapacitet. Potrebna su daljnja istraživanja na većem broju bolesnika, kao i dodatna edukacija o značaju antikoagulantnog liječenja.

Introduction: While the benefits of the cardiovascular rehabilitation (CVR) after the myocardial surgical coronary revascularization are well documented, only a few studies have indicated the benefits of CVR in patients after the aortic valve surgery.[1,2] The aim of the paper is to show the experience of the only Croatian center of the outpatient CVR in patients after the aortic valve surgery.

Patients and Methods: We retrospectively analyzed the data from the medical charts of all patients with operated aortic valve involved in the outpatient CVR program in the Institute for Cardiovascular Diseases Prevention and Rehabilitation in Zagreb from 10th January 2012, and who ceased to participate in the program by 6th October 2016. The performance of the CVR program in the Insitute has already been described.[3] In addition to the data on a type of intervention and risk factors, we have also analyzed the frequency of the optimally performed anticoagulant therapy[4] and changes to the functional capacity at the end of the CVR. The results were presented by groups according to gender by using the descriptive statistics methods.

Results: Out of 53 patients involved, 18 (34%) were women and 35 (66%) men. The average duration of CVR was 2.6 months. The main disease is aortic stenosis, which was present in 80% of men and 89% of women. The analysis of the frequency of the interventions performed, risk factors and the success of anticoagulant therapy is shown in **Table 1**. The mean functional capacity value at the beginning and end of the CVR was 5.9±1.39 and 6.8±1.17 for men and 5.6±0.85 and 6.4±1,12 METs for women.

Conclusions: Men are more often involved in the outpatient CVR program following the aortic valve surgery. Aortic stenosis is a dominant disease, where out of risk factors there is hypertension, dyslipidemia and increased body mass index to be emphasized. Patients with implanted bioprosthetic valve were involved more frequently. Anticoagulant therapy was optimal in a half of the subjects. The CVR program after the aortic valve replacement surgery improves the functional capacity. Further studies on a greater number of patients as well as additional education about the importance of anticoagulant therapy are needed.

TABLE 1. The frequency of performed cardiac surgeries, risk factors and success of anticoagulant therapy in patients undergoing outpatient cardiovascular rehabilitation following aortic valve surgery.

	Men n = 35	Women n = 18	All N = 53
Aortic stenosis	80.0% (28/35)	88.9% (16/18)	83.0% (44/53)
Aortic Valve Replacement Surgery			
Bioprosthetic aortic valve replacement	54.3% (19/35)	66.7% (12/18)	58.5% (31/53)
– bioprosthesis + coronary artery bypass grafting	26.3% (5/19)	25.0% (3/12)	25.8% (8/31)
– bioprosthesis + surgery of ascending aorta	0% (0/19)	8.3% (1/12)	3.2% (1/31)
Mechanical aortic valve replacement	45.7% (16/35)	27.8% (5/18)	39.6% (21/53)
– mechanical prostheses + surgery of ascending aorta	37.5% (6/16)	20.0% (1/5)	33.3% (7/21)
Transcatheter aortic valve implantation	0% (0/35)	5.6% (1/18)	1.9% (1/53)
Risk factors			
Average age ± standard deviation (years)	64 ± 12.4	70 ± 8.9	66.1 ± 11.6
Age range (minimum-maximum; years)	28-81	41-80	28-81
Hypertension	85.7% (30/35)	77.8% (14/18)	83.0% (44/53)
Dyslipidemia	80.0% (28/35)	66.7% (12/18)	75.5% (40/53)
Diabetes	25.7% (9/35)	11.1% (2/18)	20.8% (11/53)
Active smoking	17.1% (6/35)	27.8% (5/18)	20.8% (11/53)
Coronary artery disease	31.4% (11/35)	38.9% (7/18)	34.0% (18/53)
Mean body mass indeks (kg/m^2)	28	27.9	28.2
Overweight	71.4% (25/35)	50.0% (9/18)	64.2% (34/53)
Obesity	17.1% (6/35)	22.2% (4/18)	18.9% (10/53)
Optimaly anticoagulated patients with indications (time in target range of PV/INR)	55.0% (15/27)	55.0% (5/9)	55.0% (20/36)

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