

Figure 1. Evaluation of dyssynchrony in left ventricular and right ventricular basal segments by TDI.

Table 1. Comparison of intraventricular dyssynchrony in digoxin and control groups

intraventricular dyssynchrony	Group with digoxin	Control
Basal	76,56± 18,35	70,79 ± 14,03
3 months	63,68 ± 16,94	64,50 ± 13,59
P value	<0.001	.013

Table 2. Comparison of interventricular dyssynchrony in digoxin and control groups

interventricular dyssynchrony	Group with digoxin	Control
Basal	71,84 ± 22,53	69,50 ± 21,14
3 months	62,32 ± 21,64	66,63 ± 18,36
P value	.002	.324

Cardiac imaging / Echocardiography

PP-117

A case of double chambered right ventricle diagnosed by cardiac magnetic resonance imaging and catheterization

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Background and Aim: A 20 year-old female patient presented with the complaint of the dyspnea. Warfarin therapy was begun for pulmonary embolism. But, computerized tomography (CT) revealed no evidence of pulmonary embolism. Cardiac auscultation revealed a grade 3/6 systolic murmur over the left sternal border. ECG showed evidence of right atrial enlargement with nonspecific ST-T wave changes across the precordial leads.

Methods: Transthoracic and transesophageal echocardiography (TTE and TEE) revealed double chambered right ventricle (DCRV) across a prominent moderator band. There was no evidence of obstruction across the pulmonary outflow tract. The left ventricular systolic function was within normal limits with no valvular abnormalities. Cardiac magnetic resonance imaging (MRI) revealed a hypertrophied muscle bundle dividing the RV into two chambers. Left and right heart catheterization showed high pressure proximal and low pressure distal right heart chamber communicated each other with a narrow duct. Maximal systolic pressure gradient was measured as 160 mmHg between two chambers of right ventricle. There was no left-to-right shunt according to the blood oximetry values taken different part of cardiac chambers, pulmonary artery, superior and inferior vena cavae. Left ventriculography did not show any ventricular septal defect. Right ventriculography showed that there was a double chambered right ventricle separated from each other with abnormal muscle bundle and dilated pulmonary artery (Figure). It was decided to operate the patient but she did not accept it.

Results: DCRV is a rare congenital heart defect in which the right ventricle is separated into a high pressure proximal and low pressure distal chamber. It is associated usually with ventricular septal defect. We could not find any case like ours who has very high systolic pressure gradient between two chambers of right ventricle without ventricular septal defect in the literature. This defect is considered to be congenital and typically presents in infancy or childhood but has been reported rarely in adults. DCRV is typically found with congenital cardiac disorders, most notably ventricular septal defect and subaortic stenosis. Due to its rarity and the difficulty of visualization, DCRV continues to be misdiagnosed.

Conclusions: In conclusion, multimodality cardiac imaging using echocardiography, cardiac CT, cardiac MRI and cardiac catheterization is often required for complete characterization of complex congenital heart anomalies in adults like our case.

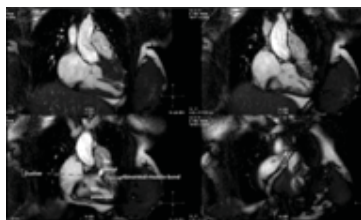


Figure 1. The appearance of DCRV with cardiac magnetic resonance imaging.

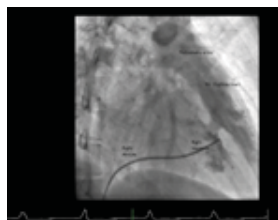


Figure 2. The appearance of DCRV with right ventriculography.

Congenital heart disease

PP-120

9 year follow up of patients with surgical and percutaneous closure of atrial septal defects: An experience from a tertiary center

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Background and Aim: ASD accounts 30-33% of all congenital heart diseases in children and 7-10% in adults. Although ASD usually asymptomatic, it can lead to exercise intolerance, arrhythmia, right ventricular dysfunction, and pulmonary hypertension with aging and life span diminishes in adult patients with untreated ASDs. The main treatment option is percutaneous closure which is less invasive and more comfortable. However transcatheter closure is unsuitable for patients with large defects, sinus venosus, primum and coronary sinus ASDs should be closed with surgically.

Methods: Totaly 305 patients with ASDs who underwent closure were evaluated at the Cardiology Clinic of İzmir Katip Çelebi University Atatürk Training and Research Hospital from 2006 until 2015. Surgical or percutaneous options were determined according to the guidelines. The main characteristics of the patients including age, gender, hypertension, coronary heart disease, diabetes mellitus, cerebrovascular disease, chronic renal failure was similar between groups. Preprocedural echocardiography revealed higher pulmonary artery stiffness, tricuspid and mitral insufficiency in surgical group. Defect size was greater in surgical group (24.8±9.2 vs 18.9±6.4 p<0.001).

Results: In our study population, the procedural success was 95% for percutaneous closure and 99% for surgery. Mortality was observed in 2 patients with surgery on follow-up. Device embolization was observed in 1% of patients. Minimal residual shunt was more occurred in percutaneous group (7% vs 0% p=0.016). The rate of minor (9% vs 3%) and major (5% vs 0%) pericardial effusion was higher in surgical treatment group (p<0.001). Arrhythmic complication rates was similar, stroke and thromboembolism were not observed in two groups. There was no development of heart failure in two groups. The decrease in pulmonary artery pressure after the procedure was significantly higher in both percutaneous (41±11 vs 24.5±6 p<0.001) and surgical closure (37±18 vs 24±6 p<0.001). Right ventricle size decreased significantly after surgical (40.2±11.2 vs 30.9±4.8 p<0.001) and percutaneous closure (36.6±5.9 vs 29.9±4.2 p<0.001). In addition right atrium size decreased significantly after procedure in both surgical (42.3±12 vs 35.2±7.9 p<0.001) and percutaneous treatment (41.7±8.1 vs 34.3±6.6 p<0.001).

Conclusions: As a conclusion if the patients are evaluated and selected carefully, both surgical and percutaneous closure is convenient and successful in the treatment of ASD.

Table 1. Comparison of echocardiographic findings pre and post procedural

Variable	Transcatheter Closure (n = 223)		
	Pre-Procedure	Post-procedure	P-value
Right atrial diameter (mm)	41.7 ± 8.1	34.3 ± 6.6	<0.001
LVDD (mm)	42.1 ± 4.1	44.8 ± 4.0	<0.001
LVSD (mm)	24.9 ± 4.1	26.2 ± 4.1	<0.001
SPAP (mmHg)	41 ± 11	24.5 ± 6	<0.001
RVDD (mm)	36.6 ± 5.9	29.9 ± 4.2	<0.001
Variable	Surgical Closure (n = 82)		
	Pre-Procedure	Post-Procedure	valueP
Right atrial diameter (mm)	42.3 ± 12	35.2 ± 7.9	<0.001
LVDD (mm)	42.2 ± 5.2	45.8 ± 4.7	<0.001
LVSD (mm)	24.1 ± 6.5	28.6 ± 4.4	<0.001
SPAP (mmHg)	37 ± 18	24 ± 6	<0.001
RVDD (mm)	40.2 ± 11.2	30.9 ± 4.8	<0.001

Lipid / Preventive cardiology

PP-121

Awareness of pleiotropic and cardioprotective effect of statins in patient with coronary artery disease

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Background and Aim: Statins are commonly used in the secondary prevention of coronary artery disease. The positive impact of statins on mortality and morbidity in these patients can be attributed to their pleiotropic effects, independent of cholesterol reduction. Studies have shown that the rate of statin use is low among patients with coronary artery disease. In this study, we aimed to investigate the reasons for poor patient compliance with statin treatment.

Methods: A total of 504 patients diagnosed with coronary heart disease were included in the study. Demo-

graphic data, clinical characteristics, and low-density lipoprotein cholesterol (LDL-C) values were recorded. **Results:** The patients were divided into 3 groups, those with no statin use, moderate-dose statin use, and high-dose statin use. Among the patients not using statins, 42% stated they did not take the medication because their cholesterol was not high or they did not know they should renew their prescription when they ran out, 35% because they were influenced by news reports in the media suggesting that cholesterol-lowering drugs were harmful, 16% were following a doctor's recommendation, and 3% had side effects to the drug, four percent of the patients stopped taking the drug due to a friend's (nonmedical person) recommendation (Figure 1A). When patients who were aware of the pleiotropic/cardioprotective effects of statins were compared with patients who were not, the more knowledgeable patients had lower noncompliance rate and mean LDL-C level, and a higher rate of LDL-C level optimization (Figure 2). Patients who were diagnosed with coronary artery disease within the previous year had lower statin noncompliance rate and mean LDL-C level, and a higher rate of LDL-C level optimization. Only 41% of the patients in the study knew the name of the drug they used (Figure 1B).

Conclusions: Medical treatment has a substantially positive effect on mortality and morbidity in patients with cardiovascular disease. We found that patients who are aware of the pleiotropic effects of statins were more compliant with treatment. We believe that spending more time explaining and emphasizing the mechanisms of action, reason for prescribing, and necessary treatment duration of drugs patients will use will result in greater compliance and improve patient care. In this way, patients may be less influenced by misinformation presented by the media.

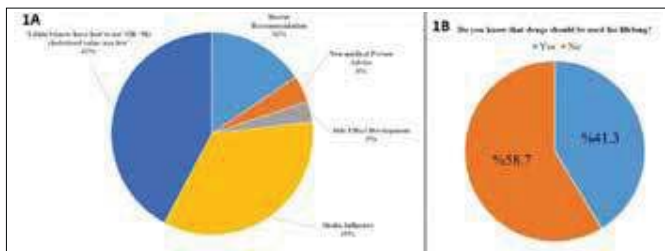


Figure 1. Main reasons for not using medications stated by patients.

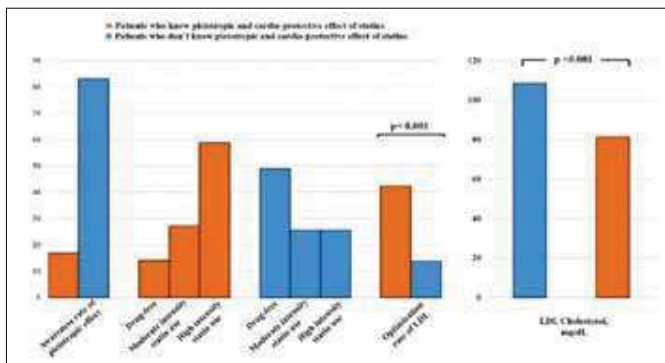


Figure 2. Differences of patients groups according to awareness of pleiotropic/cardioprotective effects of statins.

Lipid / Preventive cardiology

PP-122

Beneficial effects of coenzyme Q10 supplementation on lipid profile and intereukin-6 and intercellular adhesion molecule-1 reduction, preliminary results of a double-blind trial in acute myocardial infarction

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Background and Aim: The present investigation was aimed to improve the inflammatory factors and lipoproteins concentration in patients with myocardial infarction (MI) by supplementation with coenzyme Q10 (CoQ10).

Methods: In a double-blind, placebo-controlled study, we measured serum concentrations of one soluble cell adhesion molecules (intercellular adhesion molecule-1 [ICAM-1]), serum concentration of intereukin-6 (IL-6) and lipid profiles (high-density lipoprotein-cholesterol [HDL-C], low-density lipoprotein-cholesterol [LDL-C], total cholesterol and triglyceride [TG]) in CoQ10 supplementation group (n=26) compared with placebo group (n=26) in hyperlipidemic patients with MI. Fifty-two patients were randomized to receive 200 mg/day of CoQ10 or placebo for 12 weeks.

Results: There were no significant differences for serum LDL-C, total cholesterol, and TG between two mentioned groups after the intervention. A significant enhancement in serum HDL-C level was observed between groups after the intervention (55.46±6.87 and 44.07±6.99 mg/dl in CoQ10 and placebo groups, respectively p<0.001). Concentrations of ICAM-1 (415.03±96.89 and 453.38±0.7 ng/dl CoQ10 and placebo groups, respectively, p=0.001) and IL-6 (11±9.57 and 12.55±8.76 pg/ml CoQ10 and placebo groups, respectively p=0.001) in serum were significantly decreased in CoQ10 group.

Conclusions: Supplementation with CoQ10 in hyperlipidemic patients with MI that have statin therapy has beneficial effects on their aspects of health.

Lipid / Preventive cardiology

PP-123

The role of remnant cholesterol and triglyceride to high density lipoprotein ratio in young patients with acute myocardial infarction

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Background and Aim: With an upward trend in changing to unhealthy lifestyle, acute myocardial infarction (AMI) in young adults became a growing public health problem. To date, there has been no detailed study of the remnant cholesterol (RC) levels and triglyceride to high density lipoprotein ratio (T/H) of patients presenting with myocardial infarction (MI) at a young age. The purpose of this study was to assess the relation between RC level, T/H ratio and AMI in young adults.

Methods: A total of 491 patients aged 55 years or younger and 316 patients aged more than 55 years who underwent coronary angiography (CAG) because of AMI in our hospital were included in this study. Demographic characteristics, risk factor profile, laboratory test results, electrocardiographic and echocardiographic findings, CAG findings were assessed in the selected groups.

Results: The mean age of young population was 44.1 years and 87% were men, in older patient group mean age was 66.4 years and 72% were men. There is a significant difference between young and old patients' total cholesterol (178.0±55.2 vs 147.7±48.4 p=0.001), low density lipoprotein (99.1±50.6 vs 73.4±42.1 p=0.001), triglyceride (197.1±164.4 vs 150.8±71.3 p=0.001), very low density lipoprotein (39.4±32.4 vs 30.1±14.2 p=0.001) levels. The high density lipoprotein levels of both groups were nearly the same (38.3±8.5 vs 38.1±8.3). Both RC levels (39.4±27.7 vs 32.1±20.9 p=0.001) and T/H ratio (5.4±5.1 vs 4.1±2.3 p=0.001) were higher in the young AMI group than older AMI group.

Conclusions: In young AMI patients RC level and T/H ratio are strong risk markers and they are associated with prematurity of myocardial infarction in this group.

Lipid / Preventive cardiology

PP-124

A new algorithm suggestion for hyperlipidemia treatment indication

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Background and Aim: Hyperlipidemia treatment with statins, ezetimibe or PCSK9I is a proven treatment modality in preventing cardiovascular events. But patients do not get enough antihyperlipidemic treatment. An important reason of this is, treatment indications are not in sufficient coverage, especially in primary prevention. In our previous study, we found the inadequacy of ESC guidelines in primary prevention. In this study, we tried to create a more comprehensive algorithm for antihyperlipidemic treatment in nondiabetic patients who don't have coronary artery disease.

Methods: The main question: the patients presenting with acute coronary syndrome get statin treatment indication regardless of cholesterol levels. If these patients applied to hospital just before acute coronary syndrome, how many of them could get the treatment? 451 patients with first acute coronary syndrome (ACS) were included in the study. The patients with noncritical stenosis in the coronary angiography or history of atherosclerotic disease were excluded. According to medical histories and laboratory analyzes, patients' risk status were determined. We created a modeling by using correlation and linear regression analyzes. In this modeling we accepted 'age' as the dependent variable. We tried to predict the patients' age of first acute coronary syndrome. And this age was accepted as the age of starting antihyperlipidemic treatment.

Results: In the modeling that we created according to linear regression analysis, gender, smoking status, LDL-C level, family history, emotional stress, marital status and the number of children were found as independent risk factors. We found an interaction between gender and smoking status, and the interaction coefficients were added to the modeling. (Table) In this modeling created by these factors, 49% of the patients who have these risk factors could get the indication of antihyperlipidemic treatment. And this rate was distinctly better than ESC guideline which gave the treatment indication to only 14% of these patients (p<0.001). The main limitation of this study is, the created modeling wasn't examined in the normal population, and because of this negative predictive value wasn't calculated.

Conclusions: The scope of this model, which estimates the age of first ACS event, is broader than the ESC guidelines. It will increase the chances of the patients reaching appropriate treatment. But the model needs to be tested in large epidemiological studies involving control group.