

Summaries of Articles

An Alternative New Method in Surgical Treatment of Heart Failure: Partial Left Ventriculectomy (Batista operation):

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This report is on one of the first clinical applications of partial left ventriculectomy operation in Turkey. The procedure was described by R. Batista as an alternative new method in surgical treatment of heart failure. The 54-year-old male patient with idiopathic dilated cardiomyopathy, was in NYHA class IV. Preoperatively, left ventricular end-diastolic volume was 530 mL and end-diastolic diameter was 10.5 cm on echocardiographic evaluation. The left ventricular ejection fraction estimated by MUGA was 11 %. At operation, left ventricular lateral wall and mitral leaflets were resected in the beating heart with cardiopulmonary bypass. Mitral valve was replaced with a prosthetic valve and the left ventricle was repaired primarily with suture. We have observed an important improvement in clinical and hemodynamic findings after one week. He was discharged from hospital at the postoperative 8th day and is presently surviving in the postoperative second month.

Quantitative Evaluation of Mitral Regurgitation by Method of Proximal Flow Convergence Area

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Evaluation of mitral regurgitation is important in regard to treatment alternatives. Recent studies revealed that mitral regurgitation may be evaluated quantitatively by the proximal flow convergence area method. In this study we aimed to calculate the regurgitant volume by proximal flow convergence method, and to compare this with hemodynamic studies.

The study group consisted of 46 patients comprising 34 males (74%) and 12 females (26%) with a mean age of 26.1 ± 8.7 years. All patients underwent cardiac catheterization with echocardiographic examination after 6 to 10 hours. Regurgitant flow volumes

were compared to hemodynamic classification, while statistically significant difference was found between fourth, third, and second degrees of mitral regurgitation ($p < 0.05$), but there was no significant difference between second and first-degree mitral regurgitation. The correlation coefficient between the grades of mitral regurgitation estimated by hemodynamic study and proximal flow convergence method was 0.80, and the correlation coefficient among hemodynamic classification of mitral regurgitation and regurgitant flow volume calculated by proximal flow convergence method was 0.76.

In conclusion, assessment of regurgitant flow volume by proximal flow convergence method with color Doppler echocardiography can accurately determine hemodynamically moderate to severe mitral regurgitation. This method is a valuable noninvasive alternative to evaluate mitral regurgitation.

Efficacy of Intravenous Propafenone in Converting Atrial Fibrillation and Flutter to Sinus Rhythm

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Propafenone has been claimed to be effective in converting atrial fibrillation and flutter to sinus rhythm. However, controlled clinical trials have reported conflicting results, and data about the safety of propafenone in the setting of heart failure are lacking. The aim of the present study was to evaluate the efficacy and safety of intravenous propafenone in converting atrial fibrillation and flutter to sinus rhythm, in patients with and without heart failure.

Sixty patients with acute (< 72 h) or chronic (> 72 h) atrial fibrillation or flutter were included in a randomized, placebo-controlled, conditional cross-over study. Twenty-eight patients had heart failure of whom 12 were in NYHA class III and IV. Patients received intravenous propafenone (2 mg/kg in 10 min) and placebo subsequently with a 1-h interval if sinus rhythm was not achieved. The patients' rhythm was continuously monitored for 1 h and a 12-lead electrocardiogram, a 1-min continuous rhythm strip

and vital signs were recorded at baseline and 15, 30, 45 and 60 min after the administration of each drug. Twenty of the 59 patients (34 %) treated with propafenone converted to sinus rhythm while only 4 of the 50 patients (8%) treated with placebo converted ($p<0.001$). Propafenone was more effective in patients with acute atrial fibrillation with a success rate of 64.5 % (20 / 31). The mean time to conversion was 15 ± 9 min. The conversion rate with propafenone was not significantly different from placebo in patients with atrial flutter and chronic atrial fibrillation. While none of the 12 patients with NYHA Class III or IV heart failure and chronic atrial fibrillation responded to propafenone, 4 of the 5 patients (80%) with NYHA Class II heart failure and acute atrial fibrillation converted to sinus rhythm. Propafenone significantly decreased ($p<0.0005$ vs placebo) mean ventricular rate in nonresponders with baseline heart rate of more than 100 beats/min. No clinically significant adverse effect occurred.

We conclude that (1) intravenous propafenone treatment is effective for converting acute atrial fibrillation, however, it seems unlikely to be beneficial in atrial flutter and in chronic atrial fibrillation, (2) propafenone decreases ventricular rate in nonresponders, (3) single-dose propafenone is relatively safe even in moderate to severe heart failure.

Value of Nuclear Imaging Techniques in Determining Reperfusion Effects in Acute Myocardial Infarction

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The aim of the study was to assess the value of myocardial perfusion scintigraphy (MPS) with ^{99m}Tc tetrofosmin to determine the salvaged myocardial tissue after reperfusion procedures in patients with acute myocardial infarction (AMI). The study group consisted of 25 patients (7 female, 18 male, mean age 57.1 ± 2.0 years) who were admitted to the hospital within 12 hours of onset of AMI. On admission, 10 mCi ^{99m}Tc tetrofosmin was given and coronary angiography (CAG) was performed to all patients. Reperfusion procedures applied to 17 patients were either thrombolytic therapy or thrombolytic

therapy with percutaneous transluminal coronary angioplasty (PTCA), whereas reperfusion was not applied to 8 patients. MPS was performed to all patients within an average of 3.1 ± 0.3 hours following the tetrofosmin injection. Control CAGs were performed 24-48 hours later and MPS were repeated on 12-26 days of the AMI. Localization of the AMI was inferior in 17, anterior in 8 and the infarct-related artery was left anterior descending artery in 8, circumflex artery in 6 and right coronary artery in 11 patients. By means of control CAGs it was deduced that in 4 of the 17 patients who received thrombolytic therapy, (PTCA was performed 6 of them) and in 3 of the 8 patients who received no reperfusion procedures the infarct-related artery was not patent. Salvage index was 14.2% in patients who received thrombolytic therapy and 0.7% in the other group. Therefore MPS with ^{99m}Tc tetrofosmin is a valuable method to show the benefits of recanalization.

Computer-assisted Diagnosis and Therapy in Postoperative Intensive Care Unit: "Intensive Care Consultant" and Early Clinical Experiences

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In this study, a new expert system named ICC (Intensive Care Consultant) is developed to play a consultant role in the diagnosis and the treatment of problems encountered in early postoperative period of cardiac surgery. ICC consists of a knowledge base, a data base and an inference engine and provides consultative advice about myocardial depression, cardiac tamponade, inadequate operation, hypovolemia, surgical hemorrhage and coagulation defect. Other important features of ICC are the capability of explaining the processes of decision making, and adding new knowledge and updating its knowledge base. The system is developed in Prolog programming language environment.

Forty-one patients were sampled by this expert system in the early postoperative period in Thoracic and Cardiovascular Surgery Department of the Medical Faculty of Pamukkale University. During this period, the approaches and treatments were exactly matched with ICC's advices. Thus ICC may decrease the risk in diagnoses and treatment when used in car-

diac surgery postoperative intensive care unit. It may also be helpful in training of junior doctors.

Case Reports

İmplantable Cardioverter Defibrillator With DDD Pacemaker Function

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Patients having implantable cardioverter defibrillators (ICD), also require cardiac pacemakers in 15-20 % of the cases.

We implanted ICD with DDD pacemaker function, to a patient with idiopathic dilated cardiomyopathy, reentrant ventricular tachycardia and trifascicular block. The aim was to diminish the risk of sudden death and improve left ventricular function with decrement of the atrioventricular conduction. Since

this is the first and the only case in Turkey, the aim of this article was to point out the clinical usage of ICDs with DDD pacemaker function.

A Case of Ventricular Rupture due to Silent Myocardial Infarction

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Ventricular septal rupture (VSR) is a rare fatal complication of acute myocardial infarction (AMI). Here, we present a case of a 70-year-old man in whom VSR had developed after a presumed silent anterior myocardial infarction which was retrospectively proven by the coronary angiographic findings. This case emphasizes that silent myocardial ischemia may have similar severe complications as symptomatic clinical forms of myocardial ischemia.