

Summaries of Articles

Clinical Investigations

Left Atrial Thrombi in Mitral Valve Disease and Coronary Angiography: Neovascularity and Fistula Formation
A.R. Kazazoğlu, S. Aksöyek, O. Sancaktar, T. Okay, N. Çağlar, M. Özdemir, C. Yakut

Angiographic findings of neovascularity and fistula formation between the coronary arteries and left atrium have occasionally been reported in patients with rheumatic mitral valve disease. In this study, preoperative coronary angiograms were evaluated in 47 patients who underwent open mitral valve surgery. Atrial thrombosis was present in 11 patients (23 %). Neovascularity at the left atrial wall was angiographically visualised in 7 of these 11 patients (64 %) and in all but one of them atrial thrombi were found at surgery. In 4 of 8 patients (50 %) neovascularity arose from the circumflex artery, in 1 of 8 patients (12 %) from the right coronary artery and in 3 of 8 patients (37 %) from both the circumflex and right coronary artery. In our study group, this angiographic pattern furnished the following diagnostic values: sensitivity 64 %, specificity 97 %, positive predictive value 87 %. This study showed that in patients with mitral valve disease, coronary angiography may reveal the presence of neovascularity and fistula formation between the coronary arteries and left atrial thrombosis, but this method is only complementary in the diagnosis of atrial thrombosis.

Cardiac Echinococcosis and Surgical Treatment: Report of six cases
A. Aytaç, H. Türkoğlu, T. Paker, M.S. Bilal, A. Akçevin, C. Bakay, T. Sarıoğlu, R. Olga, M. Öztürk, C. Demiroğlu

At the Institute of Cardiology of Istanbul University, 6 patients with cardiac echinococcosis were operated between 1985-1989. They were between 12 and 53 years of age, one being female. All patients were symptomatic. Echocardiography has played a major role in diagnosis. Cardiac hydatid cysts were located in the left ventricular myocardium except one being in the right ventricular apex. There was no operative

mortality and postoperative complications. All patients were found asymptomatic after a mean follow-up of 35 months (18 to 54 months) postoperatively.

Holter Monitoring of Cardiac Arrhythmias in Hemodialysis Patients
N. Arslan, H. Çeliker, A. Demir, Ç. Gökçe, O. Onat, O. Ayhan, H. Çelebi

Cardiovascular complications and arrhythmias are common observations in hemodialysis patients with chronic renal failure. The complications are risk factors for mortality in these patients.

In 34 hemodialysis patients for a period of 24 hours, supraventricular and ventricular frequent (>30/minute) and rare (>30/minute) arrhythmias were evaluated by ambulatory electrocardiograms, during hemodialysis and in the first four and subsequent 8-24 hours after hemodialysis respectively. We observed an increase in both types of arrhythmias. There were significant differences in frequent arrhythmias ($p<0.01$) of supraventricular type and in both frequent and rare arrhythmias ($p<0.05$ and $p<0.01$ respectively) of ventricular type.

This report once more stresses the importance of following up hemodialysis patients for arrhythmias.

Cold Pressor Test Combined With Isometric Handgrip During Radionuclide Ventriculography in the Diagnosis of Coronary Disease
İ. Eren, V. Sansoy, M. Platin, A. Berkyürek, D. Güzelsoy, C. Demiroğlu

To assess the efficacy of cold pressor test combined with isometric handgrip in inducing ischemia detectable by radionuclide ventriculography (RVg), we used both tests to study 10 normal subjects and 20 patients with coronary artery disease (CAD). Mean left ventricular ejection fraction (EF) decreased during the test in both groups, but the decrease in patients with CAD was more than in normal subjects ($9.8\pm 6.1\%$ vs $0.6\pm 2.7\%$, $p<0.001$). Considering a decrease of more than 4 % in EF an abnormal response, the sensitivity and the specificity of the test

were found to be 80 % and 100 % respectively. Sixteen patients with CAD (80 %) showed new wall motion abnormalities during the test while no new wall motion abnormality was demonstrated in normal subjects.

It is concluded that combination of cold stimulation and isometric handgrip test during RVg is a useful noninvasive test for the diagnosis and functional evaluation of CAD and may be used in subjects in whom adequate exercise cannot be accomplished.

Arrhythmias and Left Ventricular Functions in Patients with Acute Myocardial Infarction and Bundle Branch Block

A. Alpman, M. Güldal, Ç. Erol, G. Akgün, C. Kervancıoğlu

Arrhythmias and left ventricular functions were investigated in 40 patients having transmural acute myocardial infarction (AMI) and bundle branch block (BBB) with 24-hr Holter-monitoring and echocardiography. As a control group, 144 patients with AMI but without BBB were evaluated during the in-hospital phase, and 45 of them were followed up for an average of 15 months.

In the hospital phase, although 32 percent of the patients with BBB had complicated arrhythmias (multiform, paired VPC, runs, R on T) 10 of the 13 patients who died did so from pump failure. During the follow-up period there was no significant difference between patients with BBB and without in regard to complicated arrhythmias (14.8 % vs 15.6 %). In patients with BBB the wall motion index and the proportion who had a left ventricular aneurysm were greater than patients with BBB (9.5 ± 0.9 vs 6.3 ± 0.6 , $p < 0.01$ and 52.0 % vs 14.3 %, $p < 0.01$, respectively). Hence, 1) Left ventricular dysfunction in patients with AMI and BBB is greater than in patients with AMI unaccompanied by BBB. 2) The frequency of complicated arrhythmias was not significantly different between the two groups.

Angiographic Progression of Coronary Heart Disease in Unoperated Patients

A. Ergin, Y. Sözütek, Ş. Korkmaz, E. Duru, Ş. Çehreli, K. Övünç, S. Göksel

Coronary angiographic examinations were repeated after periods ranging between 4 to 48 months (mean

32.7 ± 21.2) in 73 patients with varying degrees of atherosclerotic heart disease. Angiograms were retrospectively evaluated for progression (increase by 25 % of degree of stenosis). Progression of the disease was noted in 38 patients while no progression was observed in 35 patients' angiograms. There was no significant difference of family history smoking habit, blood cholesterol level, arterial blood pressure, obesity or age between the group with atherosclerotic progression and the nonprogressive group. Atherosclerotic progression frequency was significantly higher in patients with blood triglyceride level exceeding 200 mg/dl, in those with high left ventricle performance score, in those with electrocardiographically confirmed myocardial infarction prior to the first angiographic examination and in those with triple vessel disease. Progression was not different in the patients with single or double vessel disease or in those with angiographically normal coronary vessels. The time elapsed between the two studies was not effective on the progression. Control angiograms of all eight patients who had myocardial infarction in the period between the two angiographic controls showed atherosclerotic progression.

This study revealed that atherosclerotic course has a great variability between patients, and it is difficult to predict which vessel segment with or without lesions will show atherosclerotic progression and over how long a period.

Hemodynamic Findings in Right Ventricular Infarction

V. Aytekin, C. E. Karatay, N. Yazıcıoğlu, S. Aytekin, C. Demiroğlu

20 patients who had acute inferior myocardial infarction were examined to investigate the hemodynamic and electrocardiographic (ECG) findings of right ventricular infarction (RVI). The subjects were 32 to 74 years old (mean: 50.3 ± 8.6), 15 being male and 5 female. Right precordial leads (V₃R, V₄R, V₅R, V₆R) were recorded in addition to the standard 12 lead ECG on admission. ST segment elevation of 1 mm or in V₄R was accepted as an ECG criteria of RVI. ST segment elevation was detected in V₄R in 9 (45 %) of 20 patients (group A). There were no ST segment changes in the same lead of the remaining 11 patients (group B).

Right heart catheterization was performed with Swan-Ganz catheter in all patients in the coronary care unit. Right atrial, right ventricular, pulmonary arterial, pulmonary capillary wedge pressures were measured, and cardiac index was determined. Right ventricular diastolic pressure values were 5.1 ± 3.8 mmHg and 1.72 ± 3.3 mmHg ($p < 0.05$), and cardiac index values were 2.07 ± 0.67 L/min/m² and 2.70 ± 0.28 L/min/m² ($p < 0.02$) in groups A and B, respectively. There were no significant differences in other values between these two groups. These findings show that the ST segment elevation of 1 mm or more in lead V4R, in patients who have acute inferior myocardial infarction supports the diagnosis of RVI.

International Medical Publications 1990 from Turkey: Third Consecutive Leap-Year *A. Onat*

The Science Citation Index (SCI) included in its section on science and technology of "CD-ROM SCI 1990" 925 source items originating from Turkey among the data for the stated calendar year. Analysis of them revealed that 348 source items in medicine were comprised, 207 of which constituted articles and reviews.

These were individually listed in this paper and analyzed. The share of Turkey in world's medical publications increased from 0.6 per mille in the mid-1980s to 1.64 per mille in 1990.

Branches having made notable progress were surgery, gynecology, urology and ophthalmology. Hacettepe University in Ankara remained the leading institution in international medical publications, but the share of the faculties formed in the last 25 years continued to rise substantially.

Reviews

Signal-Averaged Electrocardiography and Predicting Patients at High Risk for Sudden Death

O. Sancaktar

Delayed and inhomogeneous depolarization is found in patients with ventricular tachycardia. This abnormal activity can be detected as late potentials or

spectral turbulence by applying special signal-averaging techniques to the surface electrocardiogram. Late potentials associate with an increased risk of sudden death and lethal ventricular tachyarrhythmias after MI. The information from a signal-averaged ECG is independent of other clinical factors, such as a depressed ventricular function, known to increase the risk of sudden death or VT after an acute MI. A combination of noninvasive tests, including the signal-averaged ECG, can identify a high risk subset of patients following AMI for whom more intensive diagnostic and/or therapeutic measures are indicated. The signal-averaged ECG is also useful in detecting patients who are likely to have sustained ventricular tachyarrhythmias induced with electrophysiological stimulation testing.

Rescue PTCA: For Whom and When?

T. Okay

During the early hours of an evolving acute myocardial infarction, thrombolytic therapy can dramatically improve the prognosis of selected coronary patients. Although the necessity for thrombolytic therapy in evolving acute myocardial infarction has become clear, the subsequent use of angioplasty for closed arteries remains controversial. To date there is a relative paucity of definitive data, and no results of a randomized study are available. The aim of this review is to summarize our experience and the published studies on rescue PTCA. The cumulative primary success and reocclusion rate for rescute PTCA in which non-fibrinolytic agents was used, was 87 % and 14 %, respectively. It was concluded that rescue PTCA should be considered at least for high-risk patients and those who have no more than one angiographic risk factor.

Case Reports

Aortic Valve Replacement With Aortic Homograft

İ. Durmaz, S. Büket, M. Özbaran, A. Alayunt, K. Süzer, A. Hamulu, F. Okur, Y. Atay, A. Tokbaş, H. Karali

Replacement is generally performed in the surgical treatment of aortic valvular diseases. Homograft may be the best choice in the aortic position because of

its good hemodynamic properties, unnecessary anticoagulation treatment, rare thromboembolic complications and resistance to infection.

The unique disadvantage of homografts is late degeneration. In this paper six patients were presented in whom aortic valve was replaced by using fresh homograft. Homografts were prepared in our department, and antibiotic sterilization was performed.

Partially Anomalous Pulmonary Venous Drainage with Fallot's Tetralogy
S. Karademir, S. Özkutlu, S. Atalay

Partially anomalous pulmonary venous connection was found in two of a series of 359 patients (% 0.27) with tetralogy of Fallot. Both patients presented merely with the clinical features of tetralogy of Fallot. Anomalous pulmonary venous drainage was diagnosed by cardiac catheterisation 1 and 3 years postoperatively, performed to explain the existing slight cardiomegaly.

Correction of tetralogy of Fallot without re-routing of anomalously draining vein can be performed without serious long-term sequelae if only one or two lobar vessels are affected.