

Summaries of Articles

Investigations

Rising Trend in Physical Inactivity in Turkish Women: Analysis of 1990-1995 Data on Nationwide Sample Cohort

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The intensity of physical activity, assessed in 1990 in a representative sample of the Turkish adult population aged 20 years and over, was studied in 1995 in a follow-up of the same cohort comprising 1012 men and 1096 women. In an interview by questionnaire, participants were categorized into 4 grades of physical activity in a combined assessment of both work and leisure activity. It was predicted before the study that the weighted mean physical activity would decline by 0.13 grade in either gender purely as a result of aging by 5 years.

In fact, overall mean physical activity diminished very little in men aged 20-69 years (from 2.53 to 2.49 grades), while it did considerably in women from 2.29 to 2.08 grades. After age adjustment, physical activity in men - particularly those aged 50-69 years - was evaluated to rise slightly, whereas that of women declined by 0.08 grade (representing 3-4%). This decline was especially notable in the cohort of the Mediterranean, Southeast Anatolia and the Black Sea regions of the country. Public awareness in regard to physical inactivity, an established risk factor for coronary heart disease, as well as emphasis given by physicians should be raised.

Rest-Redistribution Thallium-201 Imaging in Predicting Improvement in Left Ventricular Function After Coronary Bypass Surgery

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This study was performed to test the hypothesis that Tl-201 uptake on resting scintigraphy would identify viability in noncontracting myocardial regions and predict improved systolic function after revascularization. Fifteen of 19 consecutive patients referred for coronary artery bypass surgery (CABS) comprised the study group. Baseline studies obtained before CABS included coronary angiography and left

ventriculography, planar rest-redistribution Tl-201 imaging and radionuclide ventriculography. Postoperative studies obtained 10 weeks after CABS included repeat rest-redistribution Tl-201 imaging and radionuclide ventriculography. Segments were classified as showing, mildly reduced or severely reduced viability on the basis of quantitative analysis of defect severity and redistribution on planar resting Tl-201 imaging. Postoperative increases in segmental Tl-201 uptake of one or more grade from the viability class were considered as improved and these segments were accepted as adequately revascularized. By Tl-201 criteria 93% of severely hypokinetic segments and 78% of akinetic or dyskinetic segments had normal or mildly reduced viability. Sixty-one percent of asynergic segments with normal or mildly reduced viability improved function after surgery, while only 36% with severely reduced viability improved function ($p<0.035$). When only adequately revascularized segments were considered, the improvement was found to be 94%. The greatest improvement in global left ventricular function after surgery occurred in patients with greatest number of viable and adequately revascularized segments.

In conclusion, preoperative rest-redistribution quantitative Tl-201 imaging identifies viability in many asynergic segments in patients with coronary artery disease and depressed left ventricular function and helps the clinician for the selection of patients who will benefit from CABS.

Comparison of Early Outcome in Patients Undergoing Intracoronary Stent Implantation with Either Conventional or New Approach

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Intracoronary stent implantation has been shown to reduce restenosis in comparison to balloon angioplasty but stent thrombosis and bleeding complications related to anticoagulation are continuing to be major limitations of this method. Recently, low complication rate has been reported with optimal stent implantation by using final balloon dilatations with high pressure and therapy with aspirin + ticlopidine.

In this study we investigated the early outcome in 42 patients undergoing intracoronary stent implantation with the new approach and we compared them with 46 patients who underwent stent placement with the conventional approach. In the first group who did not undergo final balloon dilatations with high pressure and who received anticoagulant therapy, clinical success was 80 %, stent thrombosis 13%, death 2.2%, Q wave myocardial infarction 4.3%, non-Q myocardial infarction 4.3%, and groin complications 8.6%. In the second group who underwent final high-pressure balloon dilatations and were treated with combined antiplatelet therapy clinical success was 100% and there was no major complication. Ticlopidine-related leukopenia occurred in one patient (2.3%) and liver enzyme elevation in another (2.3%). Clinical success and stent thrombosis rates were significantly different between the two groups ($p<0.05$).

In conclusion, final high-pressure balloon dilatation after the stent deployment and therapy with two antiplatelet agents appear to allow to obtain low complication and high clinical success rate.

Echocardiographic Diagnosis of Coronary Artery Anomalies in Children with Tetralogy of Fallot

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We evaluated the ability of two-dimensional echocardiography to define coronary anomalies in 84 patients with tetralogy of Fallot (FT). Complete studies were obtained in 71 (% 84.5) patients. Coronary anatomy was determined to be normal by echocardiography in 53 patients and was confirmed in all of these patients except one by selective coronary angiography. In this patient accessory left anterior descending coronary artery (LAD) was detected. Echocardiographically, LAD from right coronary artery (RCA), circumflex artery from RCA, and a single left coronary artery orifice in one of each patient, crossing the right ventricular outflow tract were determined and confirmed by angiography. In 15 patients accessory LAD could not be distinguished from large conal branch crossing the right ventricular outflow tract by echocardiography.

Accurate evaluation of coronary anatomy is possible

and major coronary abnormalities crossing the right ventricular outflow tract are correctly identified in patients with tetralogy of Fallot. Selective coronary angiography before total correction should be performed in the patient with major coronary artery crossing the right ventricular outflow tract or the right and left coronary arteries and the branches of left coronary arteries could not be demonstrated by echocardiography.

Balloon Angioplasty in Native Coarctation of the Aorta

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Efficacy of balloon angioplasty was evaluated in 7 patients with native coarctation of the aorta, diagnosed at our institute. There were 3 boys and 4 girls, the oldest of whom was 8 years old and weighed 21 kg. The remaining patients were all infants with a mean age of 7.25 ± 4.1 months and mean weight of 7.2 ± 1.8 kg. In all patients the procedure was performed through the femoral artery. The monofoil balloon dilation catheter was inflated twice (5 minutes apart), each lasting 5-10 seconds. The aortic pressures and angiographic findings obtained before and after dilation were compared.

After angioplasty, the mean systolic pressure in the ascending aorta decreased from 152 ± 12 mm Hg to 138 ± 7.7 mmHg ($p<0.05$), while the systolic pressure in the descending aorta increased from 96 ± 15 mmHg to 118 ± 17 mmHg ($p<0.001$). With balloon dilation, the mean diameter of the coarctation site increased from 2.8 ± 0.7 mm to 6.8 ± 0.6 mm ($p<0.001$), and the peak systolic gradient decreased from 56 ± 15 to 20 ± 13 mmHg ($p<0.001$). The only complication, observed in one patient, was temporary absence of femoral pulse due to arterial injury. During the mean follow-up period of 4.5 ± 2.1 months the peak systolic gradient increased in only one patient with no significant change in the others.

The early results of our study show that balloon dilation is effective and safe in patients with native coarctation. We think that these patients should be followed-up closely for late complications, such as re-coarctation and aneurysm formation.

Correlation Between Intracoronary Doppler and SestaMIBI Measurements in the Assessment of Angiographic Intermediate Coronary Artery Stenosis

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Intermediate coronary artery stenosis (ICAS) (30-70 percent luminal stenosis) are special group of lesions of whom physiologic importance is hard to assess. Two different methods were used in order to evaluate the significance of ICAS and the correlation between the methods were sought. Intracoronary Doppler measurements were done after standard coronary angiography in 20 patients of whom 14 had left anterior descending artery (LAD), 5 had right coronary artery (RCA) and 1 had intermediate artery lesions. Ratio of the proximal and distal mean velocities of the ICAS and coronary flow reserve (CFR) were measured after intracoronary papaverin injection. The patients' mean age was 54 ± 6 years and 17 of them were men and 3 were women. Intracoronary injection of 3 mCi Tc-99m Sestamibi was performed in basal conditions and SPECT images were held after 3.5 ± 0.7 hours. If the ratio was smaller than 1.7 and CFR smaller than 2, the ICAS was considered as significant. In the evaluation of SPECT images, when the ratio of the counts obtained from the lesion territory to that obtained from the normal one was smaller than 75 % the ICAS was considered as significant. Pearson correlation analysis and kappa test were performed between dichotomous variables.

Correlation and kappa test results between methods were found as follows: Ratio (0.51,0.44), Stenosis-CFR (-0.52,0.32), Stenosis-MIBI (-0.48,0.17), Ratio-CFR (-0.79,0.86), Ratio-MIBI (-0.13,0.44), CFR-MIBI (0.44,0.55). The correlation between Ratio - CFR and kappa test between CFR-MIBI are statistically significant ($p < 0.001$ and $p < 0.01$, respectively).

The most powerful correlation was found between Ratio and CFR, and the weakest one was between Ratio and MIBI. The correlation and kappa value between the most predictive criteria of two methods, CFR and MIBI, were in medium strength and good, respectively.

Review

Thrombolytic Therapy in Patients with Inferior Myocardial Infarction

D. Yeşildağ, K. Korkmaz

Though mortality rate in patients with inferior MI is lower than that with anterior MI, thrombolytic therapy is beneficial to decrease the mortality rate in some situations in which a large area of myocardial tissue is jeopardized, namely in the following situations: Precordial ST depression, right ventricular infarction, hypotension, complete heart block. Additionally, if the patient comes to the hospital very early (in 3 hours) or has a previous anterior MI and if ST segment elevations are seen in more than three ECG derivations, thrombolytic therapy can be given as it may be considered that a large myocardial region, usually is in jeopardy. If there is no precordial ST depression, the benefit of thrombolytic therapy is not clear. Therefore, precordial ST depression can be accepted as a good marker to stratify the patients with inferior MI eligible for thrombolytic therapy. The benefit of reperfusion therapy is reduced in inferior MI with small infarct-related artery perfusion territory and that exhibiting no precordial ST depression.

Case Reports

Right Atrial Trombus Over Eustachian Valve: A Case Report

M. E. Korkmaz, H. Müderrisoğlu, A. Taşdelen

Patients with pulmonary thromboembolism have occasionally been seen to have thrombi in the right atrium, either free floating or attached by a narrow pedicle. These thrombi may occur without any demonstrable cause or accompany various infiltrative inferior vena caval disease. However, thrombi attached to the Eustachian valve is extremely rare. In this case we describe a patient, in whom a right atrial mass was long, narrow, rounded and had a spiral shape; while the bottom was attached over the Eustachian valve, the tip moved freely into the right ventricle. The diagnosis of thrombus was established only after the removal of the mass surgically. To our knowledge, similar description in the literature is lacking.

Protein-Losing Enteropathy Following Fontan Operation: Resolution with Corticosteroid Therapy

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T. Turan, G. Batmaz

In this report, two patients who developed protein losing enteropathy (PLE) after the Fontan operation that failed to respond to treatment with digoxin, diuretics and albumin infusions, but showed marked improvement with corticosteroid therapy are presented.

1.5 years after the Fontan operation, PLE developed with pleural-pericardial effusions and ascites in one of the patients (case 1) and peripheral edema and ascites in the other (case 2). Serum albumin levels were below 2.1 g/dl in both patients. Cardiac catheterization revealed a dilated right atrium (RA) and impaired RA emptying, with elevated RA and pulmonary artery (PA) pressures (mean 21 mmHg) and impaired left ventricular contractions in case 1 and normal RA and PA pressure (mean 14 mmHg) in case 2.

Upon failure to respond to standard medical therapy, intravenous methyl prednisolone at an equivalent of 2 mg/kg/day of prednisolone was administered. Within one month the albumin levels were normalized and prednisolone was tapered slowly to an oral maintenance dose of 10 mg/day. During a mean follow-up of 10 months, no decrease in serum albumin levels was noted, and marked clinical improvement was achieved in both patients.

Sotalol Treatment in a Case of Chaotic Atrial Tachycardia Causing Dilated Cardiomyopathy

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Chaotic atrial tachycardia is usually seen associated with chronic obstructive pulmonary disease in adult patients. It is a rare arrhythmia problem in pediatric and infantile patients. Tachyarrhythmia may present with dilated cardiomyopathy in infancy. We diagnosed chaotic atrial tachycardia in a 2,5-month old patient admitted with dilated cardiomyopathy. Sotalol 3.5 mg/kg in combination with digoxin was started and the dosage was increased to 7.5 mg/kg in accordance with the heart rate. Cardiomyopathy had resolved in two months and the rhythm reverted to sinus in five months. We did not observe any side effects.

A Case of Left Ventricular Myxoma Arising from Papillary Muscle

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D. Ünal, F. Tereneci, Ö. Peker, B. Yiğiter

A 40-year-old man with cerebral embolic and vascular accident due to a left ventricular myxoma was diagnosed by transthoracic echocardiography, cineangiography and cardiac magnetic resonance imaging techniques. At the surgery, a polypoid gelatinous and lobulated tumor was extirpated by left ventriculotomy and histopathological diagnosis was myxoma. Patient's postoperative course was uneventful. He was checked by transthoracic echocardiography two and eight months after discharge and there was no new growth. Although left ventricular myxomas are very rare, some recurrences after surgery were reported, so careful follow-up is always necessary.