

Summaries of Articles

Clinical Investigations

Use of Oral Anticoagulants in Patients with Atrial Fibrillation in Turkey

N. İncesoy, İ. Fıratlı, C. Türkoğlu, M. Öztürk

The aim of the study was to investigate the warfarin and aspirin usage patterns of physicians in patients with atrial fibrillation. Accordingly, questionnaires were sent to 438 cardiologists and internists and their indications for the use of warfarin and aspirin in patients with atrial fibrillation was asked. 366 questionnaires were received back from 113 (30.9%) cardiologists and 253(69.1%) internists.

In patients with rheumatic heart disease and chronic atrial fibrillation, the rate of regular and conditional warfarin prescription was reported to be 38.1% and 39.8%, respectively for cardiologists, whereas these rates were 27.3% and 52.2% for internists, respectively. The rate of regular use of warfarin was found to be significantly higher in cardiologists than internists ($p=0.00005$).

The rate of regular use of warfarin in patients with non-valvular atrial fibrillation and chronic atrial fibrillation was reported to be significantly higher among cardiologists (23%) than internists (4.7%) ($p<0.0001$). Likewise, regular warfarin utilization was reported more frequent in patients with intermittent atrial fibrillation and rheumatic heart disease among cardiologists than internists (27.4% versus 22.1%) ($p<0.05$), whereas no difference was found between cardiologists and internists regarding warfarin prescription in patients with intermittent atrial fibrillation and rheumatic heart disease (27.4% versus 22.1%, respectively).

For patients with chronic atrial fibrillation and valvular or non-valvular heart disease regular aspirin prescription was reported to be 77.9% and 83.2%, for cardiologists and 87.4% and 97.2% for internists, respectively.

In conclusion, warfarin has been reported to be underutilized in patients with atrial fibrillation, and cardiologists have reported significantly higher usage rates for warfarin in this regard.

Key words: Atrial fibrillation, warfarin, aspirin

Changes in P Wave Dispersion, Left Atrial Size and Function in Hypertensive Patients with Paroxysmal Atrial Fibrillation

T. Tükek, V. Akkaya, D. Atılgan, Ş. Demirel, A. B. Sözen, H. Kudat, M. Özcan, Ö. Güven, F. Korkut

Paroxysmal atrial fibrillation (AF) is a common disorder in hypertension. P wave dispersion (P), a recent marker of the inhomogeneous and fractionated dispersal of sinus node impulse, has been found to predict patients with paroxysmal AF. This study was undertaken to compare the ΔP , left atrial (LA) dimensions and contractile function in hypertensive patients with or without paroxysmal AF to find the predictors of AF attacks.

Twenty-five hypertensive patients, with paroxysmal AF (M/F:10/15, mean age 59 ± 9 years), and 25 hypertensive patients without paroxysmal AF (M/F:8/17, mean age 56 ± 13) formed the study group. Maximum (P_{max}) and minimum (P_{min}) P wave durations and their difference, (ΔP) were measured from 12-lead electrocardiogram. M-mode and 2D echocardiographic measurements, LA dimensions, volumes, and atrial ejection fraction (AEF) were recorded. Statistical comparison was done with Student-t test, and $p<0.05$ was accepted for the limit of statistical significance.

There was no statistically significant difference between groups for heart rate, interventricular septum, LV posterior wall, LV diastolic internal dimension, LV mass. Changes in LA dimensions (4.3 ± 0.5 cm vs 4.25 ± 0.4 cm, $p=0.75$) volume (78 ± 17 ml vs 74 ± 24 ml, $p=0.63$), P_{max} (110 ± 12 ms vs 107 ± 11 ms, $p=0.3$) were not statistically significant. However, P_{min} (52 ± 10 ms vs 65 ± 10 ms, $p<0.001$), AEF (0.39 ± 0.13 vs 0.52 ± 0.06 , $p<0.001$) were significantly decreased and ΔP (58 ± 10 ms vs 42 ± 7 ms, $p<0.001$), were significantly increased in paroxysmal AF patients. On multivariate analysis only ΔP was significantly associated with the development of paroxysmal AF. Cut-off value of over 45 ms in ΔP had 76% sensitivity and 86% specificity in predicting paroxysmal AF.

Atrial fibrillation in hypertensive patients seemed to develop due to changes in the microarchitecture of LA musculature which caused fractionated and inhomogenous propagation of impulse rather than changes in the anatomic structure of the atrium. The risk of AF in these patients can be predicted by the increase in ΔP while the patient is in sinus rhythm. Left atrial contractile function decreased independent of LA size in paroxysmal AF patients.

Key words: Hypertension, paroxysmal atrial fibrillation, P wave dispersion, left atrium

The Effect of Lipoprotein(a) to Thrombolytic Therapy and Spontaneous Reperfusion in Acute Myocardial Infarction: a comparative study

S. Dağdelen, N. Eren, İ. Akdemir, H. Karabulut, M. Yıldız, M. Ergelen, N. Çağlar

Although lipoprotein-(a) [Lp(a)] is a known risk factor in acute myocardial infarction (MI), no sufficient data are available on the question is affected by Lp(a) levels the outcome of patients undergoing thrombolytic therapy (TT). The aim of this study was to evaluate the role of serum Lp(a) levels on the outcome of the infarct-related artery in the use of TT following acute MI. 78 patients were randomly allocated into 3 groups. Group A consisted of 18 patients who received 1.5 million IU streptokinase (intravenously), Group B; 38 cases receiving 100 mg t-PA totally (intravenously) and Group C; 22 cases who did not receive any TT as a control group. All cases had undergone coronary angiography in the first 7 days and the degree of TIMI flow was determined in the infarct-related artery with TIMI-0 and I being considered as unsuccessful perfusion, whereas TIMI-II and III as successful. Lp(a) level ≥ 30 mg/dl was considered as high Lp(a) level. No significant difference was found between Group A and B patients, in cases with high or low Lp(a) levels in respect to patency rates ($p > 0,05$ for both). In Group C however, patency rate had been found significantly higher in cases with high Lp(a) level compared to cases with low Lp(a) ($p < 0,01$) (Table-1).

Table 1. Lp(a) level and coronary patency ratios of the groups

	Group-A Lp(a) (mg/dl)		Group-B Lp(a) (mg/dl)		Group-C Lp(a) (mg/dl)	
	Low	High	Low	High	Low	High
n	10	8	24	14	12	10
TIMI-0 or I (n)	3(%30)	2(%25)	7(%29.1)	2(%14.3)	4(%33)	9(%90)
TIMI-II or III (n)	7(%70)	6(%75)	17(%70.8)	12(%85.7)	8(%66)	1(%10)
Lp(a) (mg/dl)	11.6 \pm 5.9	41.3 \pm 13.8	9.5 \pm 6.8	51.6 \pm 18.2	12.3 \pm 6.2	44.3 \pm 17.0

Lp(a) level in Group C patients were similar with Group A and B ($p > 0.05$). The time interval from acute MI to coronary angiography was similar in all groups ($p > 0.05$ for all).

Conclusion: Lp(a) level in cases with MI does not affect the reperfusion outcome of parenteral thrombolytic agents. However, in MI patients without use of parenteral TT, spontaneous reperfusion rate was found significantly higher in cases with low Lp(a) level compared to those with high Lp(a) level.

QT Dispersion in Single-Vessel Coronary Artery Disease: Is There Relation Between QT Dispersion and the Diseased Coronary Artery or Lesion Localization?

H. Tıkız, Y. Balbay, A. D. Demir, T. Terzi, M. Soylu, T. Keleş, E. Kütük

It has been shown that QT dispersion (QTD) increases during episodes of myocardial ischemia or infarction. However, no extensive data on the relation between the diseased coronary artery or the localization of stenosis and the QTD are available. The aim of this study was to examine the relation between QTD and the coronary artery involved and lesion localization during exercise stress test (EST) in patients with single-vessel coronary artery disease (CAD) without prior myocardial infarction.

We studied 53 patients with normal coronary artery and 119 patients with single-vessel CAD. All patients underwent EST first and then coronary angiography with the suspicion of CAD. QT interval parameters were measured at rest and at the 2nd minute of the recovery period (Rec-2) in all patients. Corrected QT dispersion (QTcD) at rest was found

higher in all single-vessel disease groups [left anterior descending artery (LAD), circumflex artery (CX), right coronary artery (RCA)] compared to control group (QTcD at rest was 33 ± 12 ms in the control group, 49 ± 13 ms in LAD group, 45 ± 10 ms in the CX group and 44 ± 11 in the RCA group, $p<0.05$). QTcD at rec-2 period was also markedly higher in LAD, CX and RCA groups compared to the control group (38 ± 12 ms in the control group, 68 ± 18 ms in LAD group, 59 ± 17 ms in the CX group and 61 ± 18 ms in the RCA group, $p<0.005$). No relation was found between QT dispersion and the diseased coronary artery or lesion localization. Furthermore, it was observed that QTD increase is well correlated with ST segment depression during post-exercise period ($r=0.706$, $p>0.001$).

In conclusion, no quantitative difference was found in QT dispersion according to the diseased coronary artery and proximal or distal lesion localization. However, it was observed that patients with single-vessel CAD had wider baseline QT dispersion when compared to control group which further increased significantly with exercise. Our findings support the opinion that severity of localized ischemia rather than the extent of CAD would be expected to have greater effect on inducible QT dispersion.

Key words: Regional ischemia, single-vessel coronary artery disease, QT dispersion.

Index of Myocardial Performance in Evaluation of Left Ventricular Function in Patients with Coronary Artery Disease

S. Dağdelen, N. Eren, H. Karabulut, İ. Akdemir, M. Ergelen, M. Akçay, M. Yüce, C. Alhan, N. Çağlar

The index of myocardial performance (IMP) has been used as an easily obtainable parameter which reflects both systolic and diastolic functions of the myocardium and which correlates closely with invasive measurements. The aim of this study was to investigate the importance on assessment of left ventricular functions in patients with severe coronary artery disease. We studied 82 cases who had coronary angiography and echocardiography; Group A without coronary stenosis ($n=37$, 17 F ve 20 M, mean age 54 ± 11 years) and Group B who had

severe coronary stenosis ($>70\%$) without previous myocardial infarction ($n=45$, 18 F ve 27 M, mean age 57 ± 10 years). Using echocardiographic parameters, left ventricular isovolumetric relaxation time (IVRT), isovolumetric contraction time (IVCT), ejection time (ET), ratio of velocity time integrals of early and late diastolic mitral flow (E/Avti), E deceleration time (EDT), IMP [(IVRT+IVCT)/ET], ejection fraction (EF) and fractional shortening (FS) were calculated. During cardiac catheterization Dp/Dt [(diastolic blood pressure - left ventricular end diastolic pressure)/IVCT] was calculated. **Results:** There were significant differences in IVRT, EDT, E/Avti and the IMP between the Group A and B ($95,9\pm 14,7$ and $113,4\pm 14,3$ msec, $p<0,001$; $164,5\pm 44,8$ and $186,2\pm 33,6$ msec, $p<0,05$; $1,51\pm 0,45$ ve $1,24\pm 0,80$, $p<0,05$; $0,45\pm 0,08$ and $0,53\pm 0,07$, $p<0,001$, respectively), but there were no significant differences in IVCT, ET, EF, FS and Dp/Dt between the two groups. There were no significant differences in heart rate, systolic and diastolic blood pressures between the two groups. **Conclusion:** These data suggest that IMP may be a useful parameter and an early indicator of left ventricular dysfunction in patients with severe coronary artery disease and normal systolic function.

Key words: Index of myocardial performance, coronary artery disease

Prevalence of ECG Findings and Arrhythmias in Turkish Adults: Eight-year Follow-up

K. Adalet, A. Onat, İ. Keleş, V. Sansoy

A random sample of the Turkish adult population 3689 persons 20 years of age or older were surveyed in 59 communities with the purpose of determining the prevalence of arrhythmias and other ECG abnormalities in 1990. ECGs were coded according to the Minnesota code. Observed prevalence of ECG findings are given below at a rate per 1000: Q/QS patterns 8.4, ST depression 9, T-wave changes 24.6, left axis deviation 30.9, tall left ventricular R waves 16.8, WPW pattern 0.8, left bundle-branch block (BBB) 3.5, right BBB 4.3, frequent premature beats 10.3, atrial fibrillation/flutter 3.5 and low QRS voltage 13. In this article, the results of 8 year

follow-up of 66 percent of these patients (N: 2535) are presented. The prevalence of Q/QS pattern was 10.6, ST depression 11.0, T wave changes 42.9, left axis deviation 74.6, tall left ventricular R waves 11.8, WPW pattern 0.3, left BBB 5.5, right BBB 7.1, frequent premature beats 11.6, atrial fibrillation/flutter 7.1 and low QRS voltage 4.7. Expressed in age-adjusted rates (above 40 years), prevalence rates per 1000 persons were as follows: Q/QS pattern was 16.1 and 13.0, ST depression 12.5 and 14.5, T wave changes 50.9 and 52.8, left BBB 6.5 and 7.3, right BBB 7.7 and 8.2, left axis deviation 50.3 and 44.5, tall left ventricular R waves 31.4 and 14.5, WPW pattern 0.8 and 0.3, frequent premature beats 15.5 and 14.5, atrial fibrillation/flutter 8.3 and 9.3 in 1990 and 1998, respectively.

In conclusion, nearly all ECG findings were similar in 1990 and 1998 following age-adjusting, but the prevalences of Q/QS pattern, ST-T abnormalities and left BBB representative of coronary heart disease were lower in Turkish adults according the Western countries.

Key words: Arrhythmia, electrocardiography, epidemiology, Turkish adults

Turkish International Medical and Cardiovascular Publications Continued to Rise in 1999

A. Onat

Publications in medicine and cardiovascular medicine originating from Turkey were identified from the data of Science Citation Index Expanded in the *Web of Science* with the purpose of assessing the progress of the output. A weighted credit system was

utilized for items published jointly with a foreign or a nonmedical Turkish institution. A total of 2850 medical publications were traced which comprised 1930 articles, reviews and editorials. These figures represented an increase by 21% over the previous year. Turkey's share of world medical publication output was estimated to have risen to 6.7 per mille.

Publications in cardiovascular medicine consisted of 67 articles with full text, in addition to 49 meeting abstracts and letters to the editor and 36 publications in journals included in SCI Expanded only. Cardiologic publications from Turkey made up a world share of 6.4 per mille. With 5.3% of total Turkish medical publications, they ranked in the middle of the various fields of medicine.

Two Different Lead Implantation Techniques for Multisite Biventricular Pacemakers

M. Zoghi, M. Akın O. Yavuzgil, C. Türkoğlu

Multisite biventricular pacing has recently been proposed for treating patients with drugrefractory heart failure associating severe left ventricular systolic dysfunction and intraventricular conduction delay. Some difficulties may be seen during implantation depending on the characteristics of the technique and the patients. In this paper, we report the difficulties of lead implantation and the alternative methods we used during multisite biventricular pacemaker implantation in two cases.

Key words: Congestive heart failure, permanent pacemakers

Turkish Society of Cardiology Recommendations for Infective Endocarditis Prophylaxis