basal; ** p<.05 vs cytokine without S; #p<.05 vs S+TNF or S+IL. In conclusion, at clinically achievable concentrations S inhibits iNOS expression by inhibiting geranyl-geranylation of a protein controlling iNOS expression. Such effect may contribute to cardioprotection against excess NO production.

iNOS protein expression (arbitrary densitometric units), expressed as mean ± SD, n=3 experiments

basal (untreated cells)	34±5	basal (untreated cells)	45±4
IL	160± 5*	TNF	120±9*
IL+S 10^{-8}	71±5**	TNF+S 10^{-8}	65±18**
IL+S10^{8}+ Mev	56±8	TNF+S 10^{-8} + Mev	77±10
IL+S 10^{-7}	42±10**	TNF+S 10^{-7}	48±13**
IL+S 10^{-7} + Mev	106±10#	TNF+S 10^{-7} + Mev	105±8#
IL+S 10^{-6}	20±4**	TNF+S 10^{-6}	33±3**
IL+S 10^{-6} + Mev	131±14#	TNF+S 10^{-6} + Mev	75±8#

Noon

1116-35 **Histopathological Study of Left Atrial Appendage Obtained at the Operation for Atrial Fibrillation**

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Background: Surgical procedure for atrial fibrillation (AF) is an effective treatment. Pathological changes of resected left atrial appendages (LAA) have not been studied. The correlation between histological changes of LAA and clinical features of AF was evaluated. Also, we investigated whether histological assessments of LAA prospect the recurrence after the operation for AF.
Methods: Clinicopathological studies were made on 53 AF cases (49 biopsies and 4 autopsies: 46 - 83 years; 51 with and 2 without valvular disease) and 39 control autopsy cases with sinus rhythm (5 with and 34 without valvular disease, 42 - 86 years). Together with histopathological examination, cell size, nuclear size and shape, and % fibrosis in LAA were evaluated using NIH image system. Histological findings were compared with clinical features, including left atrial dimension (LAD), pulmonary capillary wedge pressure, duration of clinical history of AF and that of basal diseases, and cardiac rhythm after the operation. Results were analyzed by Chi square test or Fisher's exact method.
Results: The partial disarray of cardiomyocytes was recognized in both AF and control groups. Compared with control, LAA with AF showed hypertrophy of cardiomyocytes ($p < 0.001$), nuclear enlargement ($p < 0.001$), bizarre nuclear shape (BN) ($p < 0.001$), and intercellular fibrosis (ICF) ($p < 0.001$) . Long clinical history (> 10 years) of AF resulted in larger number of BN ($p < 0.025$) and more extensive ICF ($p < 0.05$). The patients with larger LAD had more extensive ICF ($p < 0.05$). Among AF group, cases with mitral stenosis had larger cell size ($p < 0.025$) and more extensive ICF ($p < 0.001$) than those with other valvular disease. Cases with recurrent AF after the operation had more cellular hypertrophy ($p < 0.01$), nuclear enlargement ($p < 0.01$), BN ($p < 0.01$), and ICF ($p < 0.01$) than others.
Conclusion: The histopathological findings of LAA reflect basal diseases and the duration of AF. However, recurrence of AF after the operation is thought to be predictable from the histological findings of bizarre nuclear shape and extensive intercellular fibrosis in LAA.

Noon

1116-36 **Prognostic Implications of Nonsustained Ventricular Tachycardia Early After ST Elevation Myocardial Infarction Treated With Fibrinolysis or Primary Angioplasty**

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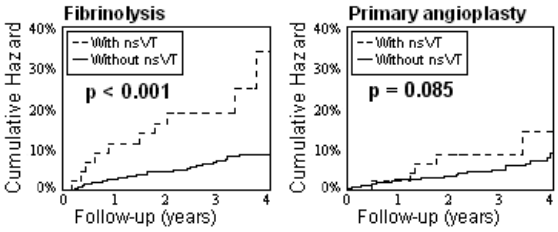
Background: The prognostic features of nonsustained ventricular tachycardia (nsVT) detected on Holter monitoring after ST-segment elevation myocardial infarction (STEMI) treated with primary angioplasty (PA) remains uncertain. We compared the prevalence and prognostic implications of nsVT detected early after STEMI treated with either fibrinolysis or PA.
Methods: Twenty four hour Holter monitoring was initiated at discharge from STEMI in 1,157 patients who had been randomized to immediate revascularization with either fibrinolysis (n = 575) or PA (n = 582) as part of the DANAMI-2 study. The definition of nsVT was $\geq$ 3 consecutive ventricular premature beats with an RR interval < 600 ms. Follow-up ranged from 2 to 5 years. Primary end point was all-cause mortality.
Results: The incidence of nsVT was 9.4% in both treatment groups ($p = 0.97$). Univariate analyses showed a significantly increased mortality associated with nsVT in fibrinolysed patients (hazard ratio: 3.2; $p < 0.001$), but only a smaller, and non-significant, trend in the PA group (hazard ratio: 2.2; $p = 0.085$).
In a stepwise multivariate Cox regression analysis incorporating clinical and investigational variables, nsVT was independently correlated to outcome after fibrinolysis ($p = 0.025$) but not after PA ($p = 0.64$).
Conclusion: The use of PA in STEMI does not affect the subsequent incidence of nsVT as compared to fibrinolysis. However, unlike in fibrinolysed patients, nsVT is not an independent predictor of outcome after primary angioplasty.



Noon

1116-37 **Use of the Implantable Loop Recorder in the Diagnosis and Management of Syncope: Long-Term Follow-Up**

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Background: Implantable loop recorders (ILR) provide an opportunity to record ECG data from a spontaneous syncopal event. We conducted a randomised study to investigate the impact of the Reveal Plus ILR on an unselected population of patients with recurrent syncope. Initial follow-up (reported ACC 2002) failed to demonstrate a reduction in syncopal events or an improvement in quality of life. We continued follow-up for a further year in all patients.
Methods: All patients presenting acutely with recurrent unexplained syncope over a 16-month period, following a basic clinical work up, were randomised to receive the ILR or conventional investigation.
Results: 421 patients presented, 201 were eligible, median age 74 (IQ range 61-81) 54% female, with median syncopes 3 (IQ range 2-6). Median follow up 17 months (IQ range 9-23). There were no significant differences between groups at randomisation. 42% of ILR patients and 8% of conventional patients received an ECG diagnosis (Hazard ratio 4.9 95%CI 2.3-12.1). Time to 2nd syncope was increased in ILR patients (Hazard ratio 2.2 95%CI 1.2-4.2). A greater variety of diagnoses and treatments were seen in ILR patients. ILR patients had fewer post randomisation investigations and fewer days in hospital, however cost savings were not statistically significant. There was a trend towards improved quality of life in the ILR group with significant increase in visual/ analogue scale/scores ($p=0.033$), no change was noted in SF-12 scores. Overall mortality was 12% with no difference between groups.
Conclusions: Investigation by ILR significantly increases the number of diagnoses and treatments available to a typical syncopal population. Long-term follow up shows reduction in syncopal events with improved quality of life in patients investigated with an ILR.

Noon

1116-38 **Selection of Optimal Electrocardiographic Criteria for Detection of Unrecognized Myocardial Infarction: A Population Based Study**

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Background: Unrecognized Myocardial Infarctions (UMIs) are fairly common and have a prognosis similar to that of acute recognized myocardial infarctions. Surveillance electrocardiograms in population-based studies identify UMI. It has been shown that the wide variation in UMI prevalence (20 to 44% of all MI) may be due to variations in ECG-MI criteria used in various studies. We sought to find the best possible ECG criteria for detection of UMI, since it has both individual and public health implications. To the best of our knowledge, this goal has never been undertaken before.
Methods: A random sample of 4203 out of 106400 Olmsted County residents, $\geq$45 years of age were invited to participate. 2042 completed the survey consisting of detailed history, physical exam, medical record abstraction, ECG and echocardiogram. Six different ECG-MI criteria (from different published studies), all based on Minnesota Code, were applied to the same survey ECG and UMI prevalence was estimated. The operating test characteristics of different criteria were compared against the gold standard of either a documented, hospitalized MI or an MI confirmed by presence of regional wall motion abnormalites by echocardiogram.
Results: The UMI proportion, relative to all myocardial infarctions, varied from 29% to 60%. The sensitivity and specificity of different ECG criteria varied between 19% to 32% and 92% to 98% respectively, with multiple statistically significant differences (p values of 0.0001). The specificity improved with increasing width and height of Q waves, wheras the sensitivity was enhanced by step-wise inclusion of minor Q, and major ST or T wave abnormality, at the incremental cost of specificity. Enhancing the diagnostic performance of ECG by exclusion of poor R wave progression as a criterion for ECG-MI, in patients with severe emphysema or severe obesity, did not make a difference.
Conclusions: In our study, the best performance was displayed by ECG criteria used in the Cardiovascular Health Study, with a near maximum sensitivity and specificity of 26% and 96%, respectively. These incorporated major Q-waves as stand alone, and minor Q waves only if accompanied by concomitant ST and T wave abnormalites.