1026-48   **Increased Serum Levels of Macrophage Migration Inhibitory Factor-Related Protein Is a Sensitive Marker for Acute Coronary Syndrome in Patients With Coronary Artery Disease**

Shoichi Miyamoto, Masaki Ikemoto, Koji Hasegawa, Noritoshi Nagaya, Shun-ichi Tamaki, Kunihisa Miwa, Masatoshi Fujita, *Department of Cardiovascular Medicine, Graduate School of Medicine, Kyoto University, Kyoto, Japan, College of Medical Technology, Kyoto University, Kyoto, Japan.*

Background: In patients with coronary artery disease (CAD), it is important to discriminate acute coronary syndrome (ACS). There is accumulating data that ACS relates to recent activation of inflammation affecting atherosclerotic plaques. Macrophage migration inhibitory factor-related protein (MRP) is a calcium-binding protein (heterodimer), which is expressed in infiltrate macrophages during inflammatory reactions. The purpose of this study was to investigate whether MRP is useful for the diagnosis of ACS. **Methods:** We studied 92 patients with angiographically proven CAD. They comprised two groups [Group ACS, Braunwald's subclass II or III of unstable angina, and acute myocardial infarction, n=53; Group SA, stable angina, n=39]. We purified MRP from human leukocytes and then prepared rabbit monoclonal antibodies against the MRP. Serum concentrations of MRP were measured using a newly-developed enzyme-linked immunosorbent assay system. In addition, we measured serum concentrations of C-reactive protein (CRP). **Results:** There were no significant differences in age, gender and coronary risk factors between the two groups. Serum MRP levels were significantly higher in Group ACS than in Group SA [3.25±3.08 (SD) microgram/ml vs. 0.77±0.31 microgram/ml, p < 0.0001]. Serum CRP levels were also significantly higher in Group ACS than in Group SA (3.11±6.14 mg/dl vs. 0.19±0.20 mg/dl, p=0.0039). Sensitivity and specificity of positive serum MRP levels (> 1.2 microgram/ml) for detection of ACS were 84.9% and 89.7%, respectively. On the other hand, sensitivity and specificity of positive serum CRP levels (> 0.5mg/dl) for detection of ACS were 52.8% and 92.3%, respectively. Sensitivity was significantly (p < 0.05) higher in the measurements of MRP than in the measurements of CRP, while specificity was comparable in the two markers. **Conclusion:** The measurement of serum MRP levels is useful for the discrimination of ACS in patients with CAD.

POSTER SESSION

1027   Optimizing Medical Therapy Post Myocardial Infarction

Sunday, March 17, 2002, Noon-2:00 p.m.
Georgia World Congress Center, Hall G
Presentation Hour: 1:00 p.m.-2:00 p.m.

1027-38   **A Randomized Comparison of the Effects of Clopidogrel and Aspirin on Thrombotic Variables and C-Reactive Protein Following Myocardial Infarction**

Mark Woodward, Gordon D. Lowe, Lesley M. Francis, Ann Rumley, Stuart Cobbe, *Institute for International Health, University of Sydney, Sydney, Australia, Departments of Medicine and Medical Cardiology, Glasgow, United Kingdom.*

Background: Previous randomised trials have shown clopidogrel to be more efficacious than aspirin in the prevention of ischemic events amongst those at high-risk. The comparative effect of these agents on thrombotic variables and C-reactive protein remains unknown.
Methods: 184 men and women, recruited from hospitals in the United Kingdom, were randomised to 75mg/day of either clopidogrel or aspirin, 3-7 days following a myocardial infarction (MI) in the CADET trial. Treatment was continued for 6 months, with blood samples taken at randomisation, 1, 3 and 6 months for measurement of thrombotic risk factors and C-reactive protein. The study was designed to have 80% power of detecting a 10% reduction in Clauss fibrinogen level.
Results: 46 subjects had a serious adverse event (22% on clopidogrel and 28% on aspirin), of which 8 were deaths (5% and 3%), and a further 11 (5% and 7%) were withdrawn from treatment. 39 (17% and 25%) had a cardiovascular event. One month after treatment both treatment groups had significantly (p<0.05) reduced Clauss fibrinogen (reduced, on average, by 20% on clopidogrel and 25% on aspirin), immunonephelometric fibrinogen (14% and 14%), C-reactive protein (90% and 90%), fibrin D-dimer (29% and 26%), von Willebrand factor (23% and 28%) and factor VIII activity (19% and 18%). Only aspirin significantly reduced tissue plasminogen activator antigen (0.4% and 12%). Neither therapy significantly reduced plasma viscosity (0.0% and 1.6%). With the exception of two isolated, marginal chance findings, there were no significant differences (p>0.05) between any of these variables between future clinic visits (1 to 3 or 3 to 6 months). There were no significant differences (p>0.05) between clopidogrel and aspirin when comparing any of these variables at either 1 or at 6 months, adjusting for baseline differences. Further adjustment for age, sex, blood pressure, smoking, height and weight had no material affect on these results.
Conclusion: Similar reductions in thrombotic risk factors and C-reactive protein following a MI were observed with clopidogrel and with aspirin. The higher efficacy of clopidogrel compared to aspirin may reflect other mechanisms.

1027-39   **Too Little Aspirin for Secondary Prevention in High Risk Patients**

Birgit Frilling, Rudolf Schiele, Anselm Kai Gitt, Steffen Schneider, Ralf Zahn, Jochen Senges, *Staedtisches Klinikum Ludwigshafen, Ludwigshafen, Germany.*

Background: Large trials have shown a significant reduction of vascular mortality in patients(pts) receiving aspirin for secondary prevention after acute myocardial infarction (AMI). About 10% of these pts do not receive aspirin after discharge. Little is known of characteristics and longtime course of these pts.
Methods: MITRA was a prospective multicenter registry of 5370 pts with AMI in Germany with a mean follow-up of 18 months. 977 pts (18%) did not receive aspirin after discharge.
Conclusions: 18% of AMI pts did not receive aspirin at discharge despite few contraindications. The majority of the pts without aspirin were at high risc for cardiovascular events. The longterm mortality of pts without aspirin was almost two times higher than in pts with aspirin.

MITRA 1994-1998

	no aspirin	aspirin	p-value
age > 70 years	48.8%	32.1%	< 0.001
no reperfusion at AMI	54.9%	38.6%	< 0.001
history of AMI	21.4%	14.7%	< 0.001
recent stroke (<3months)	2.0%	0.9%	0.005
diabetes	26.3%	19.8%	< 0.001
peptic ulcer	7.7%	3.2%	< 0.001
heart failure	43.3%	23.6%	< 0.001
renal insufficiency	3.8%	2.3%	< 0.001
mortality (18months)	19.2%	11.2%	< 0.001
non-fatal vascular event	12.8%	7.8%	0.02

1027-40   **Lower Myocardial Infarction Risk From Selective Serotonin Reuptake Inhibitors but Not Other Antidepressants**

William H. Sauer, Jesse A. Berlin, Stephen E. Kimmel, *University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania, Center for Clinical Epidemiology and Biostatistics, Philadelphia, Pennsylvania.*

Background: Prior investigations have suggested that selective serotonin reuptake inhibitors (SSRIs) may reduce myocardial infarction (MI) risk, perhaps via attenuation of serotonin-mediated platelet activation or treatment of depression, particularly in smokers. We sought to validate this finding, to examine the effect in non-smokers, and to examine the effects of non-SSRI antidepressants.
Methods: A case-control study of first MI, ages 40 through 75, was conducted among 36 hospitals in a 5-county area during a 26 month period. Cases were patients hospitalized with a first MI, and controls were randomly selected from the same geographic area. Detailed information regarding medication use and other clinical and demographic data were obtained by telephone interview.
Results: 189 SSRI users were identified among the 909 cases and 3,030 controls who participated. After adjustment, using multivariable logistic regression, for age, gender, race, insurance status, exercise, body mass index, number of cigarettes smoked per day, family history, and history of coronary disease, diabetes, hypertension, and hypercholesterolemia, the odds ratio (OR) for MI among SSRI users compared with non-antidepressant users was 0.31 (95% CI: 0.12, 0.78; P=0.01) in smokers and 1.30 (95% CI: 0.78, 2.16; P=0.30) in non-smokers (test for interaction P<0.01). Smokers using SSRIs also had a reduced risk of MI relative to those using non-SSRI antidepressants (P<0.01). These non-SSRI antidepressant users did not have a reduced risk of MI compared to non-antidepressant users among either smokers or non-smokers (adjusted OR for smokers 1.67, CI: 0.79, 3.53; P=0.18; non-smokers 1.20, CI: 0.63, 2.26; P=0.58).
Conclusion: The lower risk of MI associated with SSRI use is limited to smokers, and non-SSRIs are not associated with reduced risk. This suggests that attenuation of platelet activation may be the reason for the association between SSRI use and MI protection. This benefit may be more apparent in smokers because of the altered platelet activity seen in this group.

1027-41   **Effects of Zoloft® on Platelet/Endothelial Biomarkers in Depressed Patients After Acute Coronary Events: Sertraline Anti-Depressant Heart Attack Randomized Trial (SADHART Platelet Substudy)**

Victor Serebruany, Alexander Glassman, Alex Malinin, Ranga Krishnan, Mitch Finkel, Charles Nemeroff, Paul Gurbel, Cathryn Clary, Wilma Harrison, Christopher O'Connor, *Johns Hopkins University, Baltimore, Maryland, Duke University Medical Center, Durham, North Carolina.*

Background: Platelets could represent a missing link between incidence of depression and adverse clinical outcomes in patients after acute cardiovascular syndromes (ACS). However, it is still not clear how modern therapies of mood disorders including selective serotonin reuptake inhibitors (SSRI's) affect platelet function in such patients. We serially assessed release of established platelet/endothelial biomarkers in patients receiving sertraline versus placebo in a frame of the SADHART trial. Methods: Plasma samples (baseline, week 6, and week 16) were collected from 5 sites in the US and Canada from patients treated with Zoloft (n=28), and placebo (n=36). Aspirin and clopidogrel were allowed in this study. Platelet factor 4 (PF4), b-thromboglobulin (bTG), platelet/endothelial cell adhesion molecule-1 (PECAM-1), P-selectin, thromboxane (TxB2), prostacyclin (6-keto-PGF1a), vascular cell adhesion molecule-1 (VCAM-1), and E-selectin were mea-