16:00 - 17:30 S20 - Intensive Cardiac Care Hall B

Chairs: **D. Hasdai**
O. Kracoff

16:00 **"Wait and Watch" Approach in Intermediate Risk/ Sub-Massive Pulmonary Embolism**
O. Vatury, S. Matetzky, H. Hod
Ramat Gan

16:15 **Mean Platelet Volume on Admission Correlates with Impaired Reperfusion in Patients with Acute Myocardial Infarction Treated with Thrombolysis**
D. Pereg, M. Mosseri
Kfar-Saba

16:30 **Perioperative Antiplatelet Therapy in Patients with Coronary Stents**
E. Cohen, A. Osherov, A. Sebbag, S.M. Tafesh, A. Kerner, A. Roguin
Haifa

16:45 **Time to Hemoglobin in Acute Coronary Syndromes**
A. Steinvil, S. Banai, O. Rogowski, J. George, A. Halkin, G. Keren, A. Finkelstein, S. Berliner, Y. Arbel
Tel-Aviv

17:00 **Paroxysmal Atrial Fibrillation in Outpatients. The Role of Telemedicine in Diagnosis, Management and Short-Term Clinical Outcome**
A. Roth, N. Malov, Y. Yanay, Y. Shacham, M. Tamari, M. Golovner
Tel-Aviv

17:15 **Inferior Wall ST Segment Depression as an Early Sign of Acute Anterior Wall Myocardial Infarction**
I. Bar-Yishay, H. Gilutz, C. Cafri, R. Ilia, D. Zahger
Beer Sheva

"Wait and Watch" Approach in Intermediate Risk/ Sub-Massive Pulmonary Embolism

Ori Vatury, Shlomi Matetzky, Hanoch Hod

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Introduction: Pulmonary embolism (PE) is a major cause of morbidity and mortality.
Recent guidelines clearly differentiate between low risk PE which can be treated with heparin alone, and high risk PE which should be treated immediately with thrombolysis or embolectomy.
However treatment of intermediate risk PE is controversial. Whether or not these patients should receive immediate thrombolysis is still debated.
Patient population: A total of 31 patients diagnosed with intermediate risk PE were admitted to our ICCU between 1/2004-8/2008.
We applied a "wait and watch" policy consisting of close respiratory and homodynamic monitoring, and treatment with unfractioned heparin(UFH) to achieve a PTT of 80-90 seconds .Thrombolysis or embolectomy was considered only in patients who did not clinically improve or deteriorate within 24-48hrs of treatment.
Results: Twenty four patients were treated only with UFH and had an excellent outcome, with no in hospital mortality, improved RV size and function and a decline in pulmonary hypertension. Seven patients did not improve or deteriorated during the wait and watch period. Six of them were treated with thrombolysis; of which 2 died One patient was referred to surgical embolectomy and died post surgery.
Conclusions: Our experience supports a "wait and watch" approach for patients with intermediate risk PE, since the majority will improve only with UFH.
Thrombolysis or embolectomy should be reserved only for patients who do not improve or deteriorate after the first 24-48hrs of treatment.

Mean Platelet Volume on Admission Correlates with Impaired Reperfusion in Patients with Acute Myocardial Infarction Treated with Thrombolysis

David Pereg, Morris Mosseri

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Background: It has been shown that platelet size, measured as mean platelet volume (MPV) correlates with their activity. Elevated MPV on admission in patients with ST-elevation myocardial infarction (STEMI) treated with primary PCI predicts impaired reperfusion and increased mortality. We aimed to study whether a similar association exists among STEMI patients treated with thrombolysis.

Methods: Included were STEMI patients primarily treated with thrombolysis. Blood samples for MPV were drawn on admission. Failure of thrombolysis was defined as a need for rescue PCI, in-hospital mortality, an urgent PCI due to re-infarction or angina during hospitalization or a complete occlusion of the culprit coronary artery (TIMI flow 0) in coronary angiography following thrombolysis during hospitalization.

Results: A total of 122 patients were included in the study. In 30 patients thrombolysis failed while the other 92 patients fulfilled the criteria for successful treatment. There were no significant differences in demographic or clinical baseline characteristics of the two groups. Mean MPV was significantly higher when thrombolysis failed compared to patients with successful treatment (9.2±1.1 and 8.7±1.0 respectively, p=0.016) and remained so after multivariate analysis for age, gender, diabetes, smoking status, time to treatment and type of thrombolytic agent (p=0.019). We further divided our population into 2 groups according to MPV level. The prevalence of thrombolysis failure was significantly higher in the high MPV compared to the low MPV group. (70% and 30% respectively, p=0.04). It remained significant following multivariate analysis (p=0.048).

Conclusions: High MPV correlates with impaired reperfusion in STEMI patients treated with thrombolysis.

Perioperative Antiplatelet Therapy in Patients with Coronary Stents

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BACKGROUND: Coronary stents pose a challenge in the perioperative period. Given the anecdotal evidence and case series suggesting that DESs may be more vulnerable to thrombosis on discontinuation of antiplatelet agents (APT) than are bare-metal stents (BMS), we sought to quantify this risk.

METHODS: We evaluated all patients who underwent noncardiac surgery (NCS) between January 2005 and December 2007. Outcome measures included 30-day rate of postoperative myocardial infarction (MI), stent thrombosis, major bleeding, and all-cause mortality.

RESULTS: We identified 226 Patients (BMS=193, DES= 33) who underwent NCS a median of 891(range 7-3652) days after stent placement. Twenty seven patients (12%) underwent surgery within 180 days of stenting, 7 of whom (3%) underwent surgery within 90 days of stenting.

One hundred and thirty seven (60%) discontinued all APT a median of 7days before surgery. Twenty four patients (10%) suffered any postoperative acute coronary syndromes, Five (2%) developed myocardial infarction, one patient died. Three (1.5%) patients developed major bleeding and six (3%) minor bleeding. There was no difference whether they were taking APT or not. The rate was not dependent on stent type.

CONCLUSIONS: These data suggest that the overall risk of stent thrombosis is low in low-risk NCS patients with BMS and DES, particularly those who have undergone at least 180 days after stent implantation, even after complete discontinuation of APT.

	Stopped	%	Continued	%	
No complications	**117**	**84**	**78**	**89**	**195**
ACS	**16**	**12**	**8**	**9**	**24**
BLEEDING	**6**	**4**	**2**	**2**	**8**
	139		**88**		**227**

Time to Hemoglobin in Acute Coronary Syndromes

Arie Steinvil [1], Shmuel Banai [2], Ori Rogowski [1], Jacob George [2], Amir Halkin [2], Gad Keren [2], Ariel Finkelstein [2], Shlomo Berliner [1], Yaron Arbel [1]

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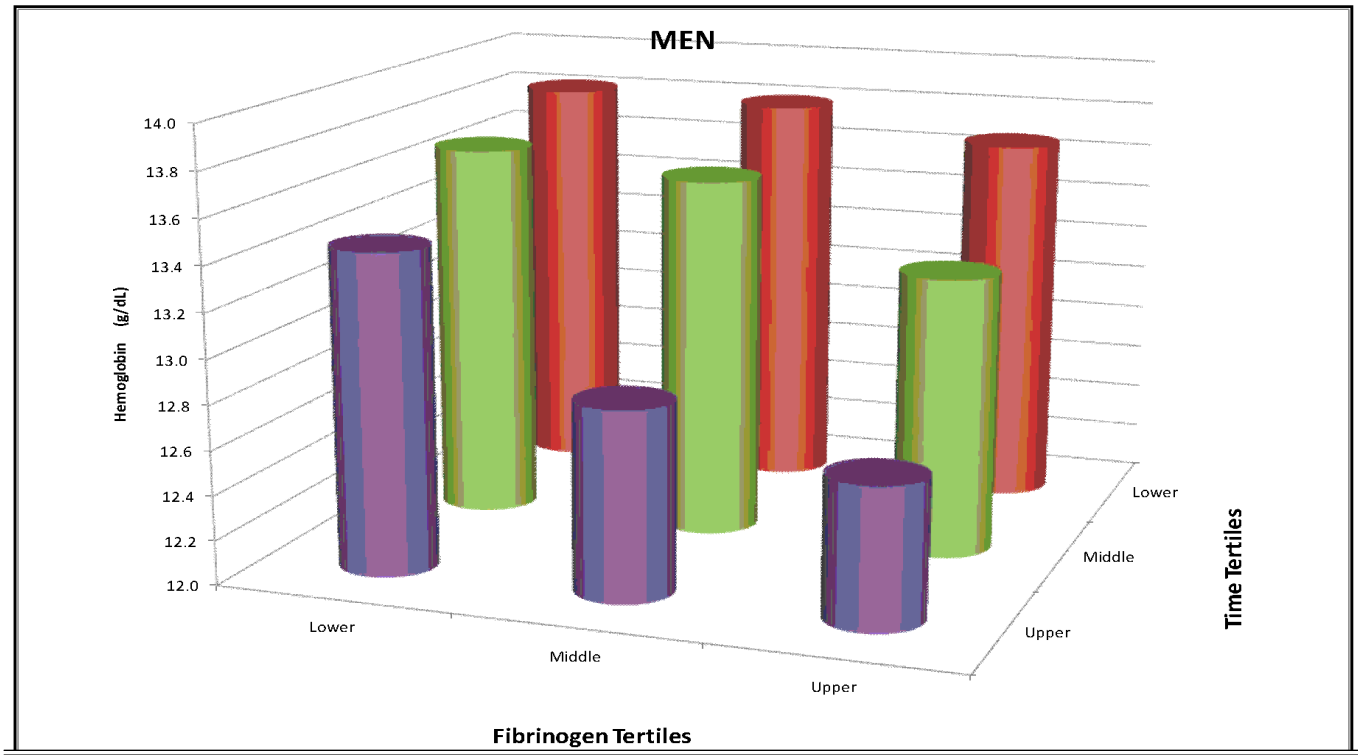
Background: Anemia correlates with poor prognosis in acute coronary syndromes (ACS). Lower hemoglobin concentrations in ACS patients might be a result of the underlying inflammatory response. We have presently explored the interactions between Hemoglobin, and inflammatory biomarkers in relation to the time elapsed from onset of anginal symptom to coronary angiography.

Methods: 850 consecutive male patients with ACS (435 with unstable angina, 415 with acute MI) were enrolled. Linear regression models were fitted for Hemoglobin as the dependant variable and age, renal function, cardiovascular risk factors, relevant medications, time from symptom onset to angiography, and the inflammatory variables as the independent variables. Two way Anova tests were used to determine interactions between time tertiles from symptoms onset and the tertiles of the respective Hemoglobin and inflammatory biomarkers concentrations.

Results: A significant decrease in hemoglobin concentrations with a parallel increase in CRP and fibrinogen concentrations were observed between the tertiles of time from symptom onset to angiography ($P < 0.001$). In the linear models CRP and fibrinogen entered as highly significant predictors of lower hemoglobin concentrations ($p<0.001$, $r^2=0.33$; $p<0.001$ $r^2=0.34$; respectively).

Conclusion: Inflammatory biomarkers are independent predictors of lower hemoglobin concentration in ACS patients. Longer time interval from symptom onset to angiography results in lower hemoglobin concentrations and higher inflammatory biomarker levels in men presenting with ACS.



Paroxysmal Atrial Fibrillation in Outpatients. The Role of Telemedicine in Diagnosis, Management and Short-Term Clinical Outcome

Arie Roth [1,2,3], Nomi Malov [1,2], Yigal Yanay [2], Yacov Shacham [1], Mira Tamari [2], Michal Golovner [2]

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Background: Patients with symptomatic or non-symptomatic paroxysmal atrial fibrillation (PAF) are at risk for thromboembolitic events. Telemedicine is well-recognized for efficacious detection and follow-up of cardiac arrhythmias.
Purpose: To assess the short-term clinical follow-up of patients whose documented PAF episode was treated by the SHL-Telemedicine mobile intensive care unit (MICU) team and remained home and were telephonically followed-up (symptoms and ECG transmissions) for 48 hours by SHL-Telemedicine's monitor center. They were transported to hospital if the PAF persisted.
Methods: All incoming calls to SHL-Telemedicine by patients with symptomatic and documented PAF between 2002-2008 were screened for the ones who fulfilled the above criteria.
Results: 116 patients (mean age 75±10 years, range 16-99; 77% female) who experienced 166 episodes of PAF were included. They all had various forms of heart disease: 32% past MI, 53% anginal syndrome, 24% heart failure and 37% valvular involvement. In addition, 56% were hypertensive and 16% were diabetics. Regular medications included antiarrhythmics (65%), ACE inhibitors (45%), statins (68%), anti-aggregants (63%), and anticoagulants (51%). The patients received oral/intravenous verapamil or diazepam or intravenous digoxin during the PAF episode: 113/166 (68%) converted to sinus rhythm within 16±12 hours from the call, and their heart rate decreased significantly (from 86 bpm to 68 bpm, $p<0.001$). Heart rate slowed only slightly (from 89 bpm to 86 bpm) in those who remained in AF.
Conclusions: Telemedicine can accurately monitor cardiac rhythm and detect PAF that fails to convert within 48 hours, possibly averting devastating thromboembolic events, especially in non-optimally anticoagulated individuals.

Inferior Wall ST Segment Depression as an Early Sign of Acute Anterior Wall Myocardial Infarction

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BACKGROUND: Reciprocal changes are considered changes that accompany ST segment elevation in the ischemic territory during AMI. We examined the hypothesis that isolated inferior horizontal ST segment depression on admission is an early sign of anterior wall infarction.

METHODS: 49 ACS patients admitted to the CCU between 1/96-6/08 whose presenting ECG showed inferior ST segment depression (45%) or inferior and V5 &V6 ST segment depression (55%), without any ST segment elevations were included. Admission and follow up ECGs were reviewed and ST segment deflections recorded. The culprit artery was determined based on angiographic and echocardiographic data. Patient characteristics and pertinent medical information were recorded. Comparison of admission and follow-up ECG was performed using the paired t-test. Correlations were performed by the Chi-square test or Spearmen's correlation test, as appropriate.

RESULTS: The LAD or one of its branches was the culprit in 60% of patients. The right coronary artery and the left circumflex were the culprit in 10% of patients each, 4% had a left main lesion. In 12% of patients the culprit artery could not be determined with certainty and 4% had normal coronaries. Sum of ST segment depression in inferior leads, V5-V6 involvement and presence of "hyperacute" T waves in the anterior leads did not predict LAD involvement as the culprit artery. Echocardiography was performed in 48 patients within 1.09 ± 0.93 days of admission. 21 had a normal echo study, 16 of the remaining 27 (59%) had wall motion abnormality in the LAD territory.

CONCLUSION: ST segment depression in the inferior wall leads during ACS is usually an early sign of anterior wall MI, in which the LAD or one of its branches is the culprit artery. The value of urgent reperfusion in these patients deserves further evaluation.