was measured and programmed atrial stimulation with 1 and 2 ES performed in control state (CS) and after isoproterenol.

**Results:** At 2nd study, among pts studied for syncope at study 1, 1 has still syncope, 2 have AVRT, 1 has rapid AF, and 2 are asymptomatic. Among pts with AVRT at study 1, 25 have AVRT, 7 are asymptomatic and 2 have AF. Among pts with AF, 4 have still AF and 1 is asymptomatic. Among asymptomatic pts 3 have a spontaneous malignant form, 7 remain asymptomatic, 3 have AVRT, 1 has syncope and 1 has AF. All AVRT or AF occurred in pts with inducible AVRT or AF at EPS 1. The highest rate conducted by AP was significantly lower in CS and after isoproterenol at study 2 (157±45 b/min, 193±113) than at study 1 (199±65, 257±65). AP has lost anterograde condu- ction properties in 17 pts aged from 17 to 67 years (47±15); all of them but one had initially 1/1 conduction through AP 170/min. However 8 of them had still AVRT. Among pts with initially rapid conduction through AP (250/min), all but one have a rapid conduction at EPS 2, 3 of them which were asymptomatic developed rapid AF.

**Conclusion:** The study confirms that a benign form of WPW without inducible AVRT or AF remains benign. Pts with AVRT and AF and long refractory period become asymptomatic in 20% of cases. Pts with inducible rapid AF remain at high risk of events in most cases.

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**Low stress-induced ST segment/Heart rate hysteresis as a predictor of low microvolt T-wave alternans**

Cyril Cohen (1), Gerald Roul (1), Silviu Stanciu (2), Christian Goetz (3), André Constantinesco (3)

**Background:** ST segment / heart rate hysteresis can improve the diagnostic performance of the exercise ECG for prediction of coronary artery disease and cardiovascular mortality. As this simple variable integrates the heart-rate selection, exercise intensity and recovery phase, ST/HR hysteresis is related both to ischemia and sympathovagal balance.

**Methods and Results:** All 339 consecutive patients who were referred for a pharmacological stress test with dipyridamol. The maximum TWA was determined with the modified moving average method. Using for ST/HR hysteresis a cutoff of 0.038 mV, yields a 75% negative predictive value for a pharmacological stress test with dipyridamol SPECT imaging.

**Conclusions:** TWA can be measured during a physical examination and studied in active patients. The diagnostic performance of the exercise ECG has been significantly improved using the ST/HR hysteresis parameter.

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**Six-hour holter recording of microvolt T-wave alternans and heart rate turbulence in the CCU compared to classical 24-hour ambulatory ECG**

Cyril Cohen (1), N Messas (1), Florian Zores (1), Silviu Stanciu (2), Gerald Roul (1)

**Background:** T-wave alternans (TWA) and heart rate turbulence (HRT) measured during 24-hour ECG recordings are 2 powerful non-invasive tools to risk-stratify cardiovascular patients. The aim of our study is to assess whether a fast ECG-holter scan yields different information from classical 24-hour ambulatory ECG regarding TWA and HRT measurements.

**Methods:** All consecutive 21 patients with a non-ST-elevated myocardial infarction and admitted in intensive care unit of cardiology, have been monitored with an ECG-holter for classical, TWA and HRT analysis over 24 hours. TWA has been measured with the modified moving average method. Routine reading of the holters has been followed by a specific analysis. Each 24-hour period has been divided into four equal periods. Maximal TWA, T-onset and T-slope for HRT over those four 6-hour periods have been analyzed and compared with full day results using a repeated measures analysis of variance (ANOVA).

**Results:** 16 men and 5 women aged between 31 and 90 (mean 57.5 +/- 24.8) have been included. Mean maximal TWA was 73 +/- 25 µV. 6-hour maximal TWA was 59 +/- 23 µV, 55 +/- 26 µV, 56 +/- 30.01 and 48 +/- 23.27 µV (p=0.11). HRT as assessed by T onset and T slope were -0.00619 % +/- 0.02, 0.0033 % +/- 0.04, 0.00571 % +/- 0.03, -0.00952 % +/- 0.03 (p=0.46) and 3.75 +/- 3.99, 5.46 +/- 7.29, 6.32 +/- 9.13, 5.96 +/- 10.85 (p=0.46) respectively for each time period.

**Conclusion:** This preliminary study suggests that a 6-hour ECG-Holter recording could be a reliable and feasible method to assess cardiovascular mortality and risk of SCD in patients admitted for an acute coronary syndrome in intensive care unit by studying TWA and HRT. Faster risk stratification could thus be done during hospitalization in order to optimize therapeutics and better identify candidate for fast ICU discharge.

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**C-reactive protein: a new marker of arrhythmic event in Brugada syndrome?**

Aimé Bonny (1), Fabrice Larrazet (1), Ivo Ditah (2), Françoise Hiddenc-Lucet (3), Guy Fontaine (3), Robert Frank (3)

**Background:** We studied the relationship between C-reactive protein (CRP) and clinical manifestation of Brugada syndrome.

**Methods and Results:** All patients underwent physical examination and detailed cardiac tests. At admission, prior to any intervention, they had blood samples drawn for CRP. Among 54 patients, 37% were symptomatic (17 syncope and 3 aborted sudden death) and 63% were asymptomatic. Mean CRP level was 2,4±1,42mg/l in symptomatic group and 1,4±1,32mg/l in asymptomatic group (P=0.03). In a multivariate model, CRP concentrations 2 mg/l were associated with syncope, 2 have AVRT, 1 has rapid AF, and 2 are asymptomatic. Among pts with AVRT at study 1, 25 have AVRT, 7 are asymptomatic and 2 have AF. Among pts with AF, 4 have still AF and 1 is asymptomatic. Among asymptomatic pts 3 have a spontaneous malignant form, 7 remain asymptomatic, 3 have AVRT, 1 has syncope and 1 has AF. All AVRT or AF occurred in pts with inducible AVRT or AF at EPS 1. The highest rate conducted by AP was significantly lower in CS and after isoproterenol at study 2 (157±45 b/min, 193±113) than at study 1 (199±65, 257±65). AP has lost anterograde condu- ction properties in 17 pts aged from 17 to 67 years (47±15); all of them but one had initially 1/1 conduction through AP 170/min. However 8 of them had still AVRT. Among pts with initially rapid conduction through AP (250/min), all but one have a rapid conduction at EPS 2; 3 of them which were asymptomatic developed rapid AF.

**Conclusion:** The study confirms that a benign form of WPW without inducible AVRT or AF remains benign. Pts with AVRT and AF and long refractory period become asymptomatic in 20% of cases. Pts with inducible rapid AF remain at high risk of events in most cases.

**Purpose:** We aimed to assess the absence of an elevated TWA under a dipyridamol SPECT imaging.

**Methods and Results:** All 339 consecutive patients who were referred for a pharmacological stress test with dipyridamol. The maximum TWA was determined with the modified moving average method. Using for ST/HR hysteresis a cutoff of 0.038 mV, yields a 75% negative predictive value for a pharmacological stress test with dipyridamol SPECT imaging.

**Conclusions:** TWA can be measured during a physical examination and studied in active patients. The diagnostic performance of the exercise ECG has been significantly improved using the ST/HR hysteresis parameter.

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**P wave signal analysis is able to recognize with a good accuracy patients with or without previous atrial fibrillation**

Philippe Castellant (1), Jean-Jacques Blanc (1), Salim Graja (2), Yves Etienne (1), Jean-Marc Boucher (2), Marjaneh Fatemi (1)

**Background:** Paroxysmal atrial fibrillation (PAF) is a common cardiac arrhythmia but difficult to diagnose: frequently asymptomatic and when symptomatic too sporadic to be captured by electrocardiogram (ECG) or even long duration Holter monitoring. However this diagnosis carries a major importance as it could induce key changes in diagnosis and therapy (anticoagulation). Our...