Topic 09 – Prevention / Epidemiology / Nutrition

January 15th, Thursday 2015

0013

Predictive accuracy of the ESC score in French general population

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Purpose: The assessment of cardiovascular risk is uniformly recommended as a decision-support for therapies aimed at preventing cardiovascular diseases. The aim of this study was to assess the predictive accuracy of the ESC SCORE in French general population.

Methods: Our analysis was based on the Third French MONICA Cross-sectional population-based survey (from South-Western(SW), North-Eastern(NE) and Northern(N) France), on cardiovascular risk factors (1995-1996) and on subjects consecutively referred for cardiovascular check-up to a Department of Preventive Cardiology (DPC) in a SW French University Hospital since 1995. Vital status was obtained 10 years after inclusion. The 10-year predicted risk of cardiovascular (CV) death was calculated using the SCORE equation for low-risk countries and was compared to the 10-year incidence of CV death.

Results: SCORE equation was applied in 6915 participants aged 35-64 (56% were men) and 56 CV deaths occurred. The CV death rate was 0.67%[95% confidence interval: 0.39-1.13] in DPC and 0.81%[0.42-1.56], 1.10%[0.61-1.98] and 2.00%[1.31-3.05] in SW, NE and N MONICA sample, respectively. The median risk SCORE was 0.97% and was not significantly different to the 10-year incidence of CV death (1.05%[0.81-1.37]). The C-statistic of the SCORE equation in our sample was 79%[73-85]. The median risk SCORE according to sex, age, educational level, family history of premature CV disease, physical activity, impaired fasting glucose, smoking, systolic blood pressure, total cholesterol, LDL-cholesterol, HDL-cholesterol and risk SCORE was not different to the 10-year incidence of CV death. According to the cut-point of 5%, 6440 participants(93%) were correctly classified using the SCORE equation (i.e. subjects with risk SCORE≥5% deceased during the 10-year period or subjects with risk SCORE<5% non-deceased during the 10-year period).

Conclusions: In French general population aged 35-64, the SCORE equation adequately predicts CV death.

0015

High LDL cholesterol decreases life expectancy in primary prevention

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Background: The 2012 ESC guidelines recommend a LDL-cholesterol (LDL-C) lower than 3 mmol/L for subjects at low or moderate risk with a class I/A and a strong grade. According to ESC, statins should be used as the drugs of first choice. The aim of this study was to assess the association between elevated LDL-C with total and cardiovascular (CV) mortality in primary prevention.

Methods: Our study population consisted in patients who had been admitted from 1995 to 2011 in a preventive cardiology unit of a large French university hospital. We excluded patients whose age was less than 30 and all patients with previous ischemic heart disease. Vital status in 2011 was checked through the death national database.

Results: 4885 patients were included (59% men; 53±10 yrs). After a mean follow-up of 8.6 years, 129 deaths, including 31 CV deaths, were recorded. The mean LDL-C was 3.98±1.18 mmol/L (3.90 in men and 4.11 in women). Among these 4885 patients, 2648 (54.2%) had LDL-C lower than 4 mmol/L, 1890 (38.7%) had LDL-C between 4 and 6 mmol/L, 347 (7.1%) had LDL-C higher than 6 mmol/L, and 1833 (37.5%) were on current lipid-lowering treatment. After adjustment for age, gender, smoking, hypertension and diabetes, an increased LDL-C > 4 mmol/L was significantly associated with all cause mortality (hazard ratio (HR) 2.06; 95% confidence interval (CI) [1.42-3.00], p=0.001) and with CV mortality (HR 2.18; 95% CI [1.04-4.57], p=0.04). After adjustment for these classical risk factors and for lipid-lowering treatment, LDL-C remained significantly associated with an increasing risk of all cause mortality; with LDL-C < 4 mmol/L as a reference class, LDL-C levels between 4 and 6 mmol/L were associated with an increased all cause mortality (HR 1.72; 95% CI [1.17-2.54], p=0.006) as well as LDL-C > 6 mmol/L (HR 2.60; 95% CI [1.49-4.85], p=0.001).

Conclusions: LDL-C levels higher than 4 mmol/L were significantly associated with all-cause and cardiovascular mortality in primary prevention.

0578

Valvular atrial fibrillation and the risk of stroke and deaths: additional prognostic value of the CHA2DS2-VASc score

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Purpose: The CHA_2DS_2-VASc score has been validated and is widely used to stratify the risk of thromboembolism in patients with non-valvular atrial fibrillation (AF). We sought to investigate whether this score could also be useful to predict the risk of stroke and death in patients with valvular AF.

Methods: Between 1998 and 2011, 1,592 consecutive patients, hospitalised for AF, 300 with valvular AF (mitral and/or aortic valve disease) and 1,292 with non-valvular AF were enrolled in the cohort. All patients were followed-up at least 6 months and cardiovascular events recorded. The endpoint was defined as the first occurrence of stroke or death. The Cox analysis was adjusted on warfarin, antiplatelet and antiarrhythmic treatments at discharge.

Results: Mean age was 73±14 years in valvular AF and 68±15 in non-valvular AF (p=0.0001). At baseline, in the valvular AF group CHA_2DS_2-VASc score were = 0 for 14 (5%) patients, = 1 for 28 (9%), ≥ 2 for 258 (86%). Non-valvular AF CHA_2DS_2-VASc scores were = 0 for 158 (12%), = 1 for 189 (15), ≥2 for 945 (73%). The difference was statistically significant (p<0.0001). During a mean follow-up of 4.6±3.5 years, the patients with valvular AF experienced 154 (51%) and the patients with non-valvular AF experienced 409 (32%) strokes or deaths. The Kaplan-Meier curves (figure) show that patients with a CHA_2DS_2-VASc score ≥2 were at higher risk of stroke or death. The adjusted Cox model, showed that valvular AF (HR, 1.57, 95%CI 1.30-1.89, p<0.0001) and a CHA_2DS_2-VASc score ≥2 (HR, 5.30, 95%CI 3.77-7.45, p<0.0001) were predictors of risk of stroke or death.

Conclusion: These results suggest that a CHA_2DS_2-VASc score ≥2 is associated with a higher risk of stroke and deaths, at mid-term follow-up, in patients with valvular AF (figure next page).
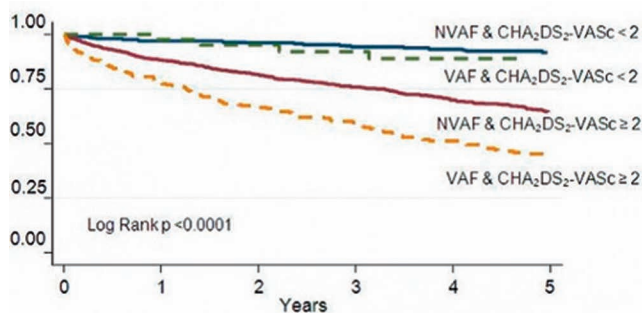
Abstract 0578 – Figure: Kaplan-Meier survival curves

0507

Patients' understanding of chronic anticoagulant therapy: evaluation of the knowledge of patients admitted in a cardiology unit

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Purpose: There is good evidence that adherence to medical treatment is enhanced by knowledge and understanding of the drug, its benefits and its side-effects.

Objectives: To investigate knowledge and perceptions of antithrombotic therapy among a population of patients receiving chronic anticoagulation therapy with vitamine k antagonists (VKA) or direct oral anticoagulants (DOA).

Methods: We conducted a prospective study among 122 patients admitted in our cardiology unit and receiving anticoagulant therapy for more than 3 months. Atrial fibrillation was the main indication of therapy (n=63, 51.6%) and VKA concerned 87% of patients. All patients were invited to fill in a questionnaire (11 questions), which was handed out by a nurse in a face-to-face interview. None of the patients refused to fill in the questionnaire, which was completed at once and independently.

Results: While the vast majority of patients know that they have anti-coagulant therapy (96,7%), patients presented a clear lack of knowledge concerning mainly food and drug interaction **(table 1)**, the possible conse-

quences of under- or over-anticoagulation (n=31; 25,4%), the reason why they have this therapy (n=39; 32,7%) and how to control their treatment. Comparing the two therapies, we observed a non significant difference in knowledge concerning VKA and DOA except knowledge of risks of therapy which was superior in the DOA group (p<0.05).

In conclusion: Patients' anticoagulant therapy knowledge, either vitamin K antagonists or DOA, is poor. With the increasing use of DOA, from which we have no more biologic control to assess compliance, improved patient education and physician involvement in therapeutic education, is crucial.

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0008

Anxiety and depressive symptoms after acute coronary syndrome: prevalence, evolution and predictive factors
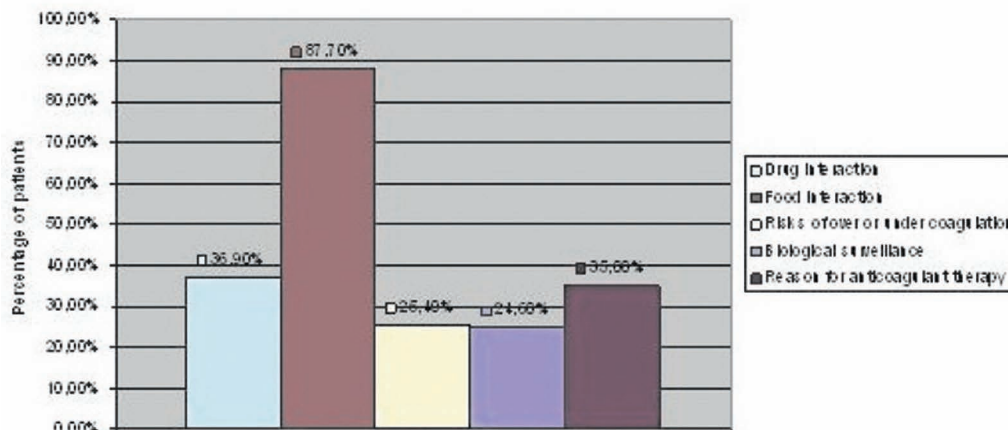
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Anxiety and depressive symptoms after acute coronary syndrome (ACS) are associated with increased mortality and morbidity, more random cardiac rehabilitation, unhealthy behaviours. The aim of this study was to determine prevalence of these symptoms after ACS, and associated factors.

During 6 months, all patients admitted to the Hospital of Reims for ACS were included. Hospital Anxiety and Depression Score (HADS) was used to screen anxiodepressive symptoms during initial hospitalization and 3 months later. The analysis focused on socio-demographic, clinico-biological and therapeutic data.

We included 101 patients. 40,6% had anxiety and depressive symptoms on admission and 41,6% at 3 months. Factors associated with a high persistent 3 month score were: initial HADS score (r = 0,81 p<0.001), history of depression (OR 14,1; CI95% 1,7-42,4 p<0,001), history of coronary heart disease (OR 5,8; 95% CI95% 1,7-19,6 p<0,001), young age (54,4 years ± 10,9 p 0,039), social isolation (OR 12,5; CI95% 4,2-37,3 p< ,001), smoking (OR 8,7; CI95% 3,5-21,7 p<0.001), physical inactivity (OR 5,1; CI95% 2, 3-10,9 p <0.001), early ventricular arrhythmias (OR 13,5; CI95% 5,1-35,9 p<0,001). Also high C-reactive protein (OR 11,8; p< 0,001), a low HDL-cholesterol (mean 0,4g/L p < 0.001), and high level of liver enzyme (OR 0,3; p<0,001) were associated with positive score. 17 patients have attempted suicide and 2 patients have committed suicide.

▶

Abstract 0507 – Figure: Lack of knowledge concerning anticoagluant therapy