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How many “JUPITER eligible” patients are there in France?


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Background: In 2008, the results of the JUPITER trial were published, showing lower rates of mortality and cardiovascular morbidity in the rosuvastatin group compared to placebo. Beyond these results, a major question often arose among health practitioners and agencies: How many “JUPITER eligible” people can we find in the real world? The aim of the present analysis was to estimate the proportion of French subjects matching the JUPITER inclusion criteria.

Methods: We used data from a cross-sectional study on the prevalence of cardiovascular risk factors in the French general population aged 35-75. The study was conducted in 2006-2007 in Lille, Strasbourg and Toulouse areas. Participants were selected by drawing on polling lists and a fasting blood sample was obtained. A direct standardization on age and gender was applied to percentages, using the 2006 French population as reference.

Results: The sample was restricted to 1527 men and women aged 50-75 and 60-75, respectively, without lipid-lowering therapy, as younger people and treated dyslipidemic patients were not included in the JUPITER trial. Among them, 6.8% [95% confidence interval: 5.5% - 8.1%] fulfilled the JUPITER inclusion criteria (mainly CRP ≥ 2 mg/L, LDL-cholesterol < 3.4 mmol/L, triglycerides < 5.6 mmol/L, no diabetes or cardiovascular disease). Median body mass index, LDL-cholesterol, and CRP in these JUPITER eligible patients were 28.0 ± 3.0 kg/m², 3.02 ± 4.4 mmol/L, and 1.9 ± 2.0 mg/L, respectively. Sixty percent had hypertension, 12% had HDL-cholesterol < 1 mmol/L, 18% were current smokers, 33% had a metabolic syndrome and 4% a family history of premature coronary heart disease. The median Framingham ten-year risk score reached 12%.

Conclusion: Among people aged 50-75, without lipid lowering therapy, 6.8% could match the JUPITER trial inclusion criteria. These data bring valuable information to estimate the number of eligible patients if the marketing authorization of rosuvastatin was extended.

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Does aspirin administration twice a day reduce biological aspirin resistance in type 2 diabetes mellitus in secondary cardiovascular prevention?

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Background: Aspirin efficacy to prevent cardiovascular events is lower in type-2 diabetic patients (DM) than in general population. Biological aspirin resistance can reach 40% of patients and is associated with major clinical events. Preliminary data suggest that biological aspirin efficacy can decrease progressively during the 24 hours after aspirin ingestion in patients with DM, inflammatory states or active smoking.

Aim: The aim of our study is to evaluate biological efficacy of 150mg/day aspirin given once daily compared to 75mg given twice a day (150mg/day) in a cross over study in diabetic patients.

Methods: This randomized prospective study is performed in 80 patients with DM and high risk of biological aspirin resistance (hsCRP > 3mg/L, fibrinogen > 3.5g/L or current smoking). Each patient receive randomly and successively 2 regimens: 150mg aspirin/day given once daily in the morning – 150mg aspirin/day given as 75mg in the morning and 75mg in the evening. Primary endpoint is the percentage of aspirin resistant patients measured by light transmission aggregometry using arachidonic acid 0.5mg/mL (LTA-AA - resistance defined as 20% residual aggregation).

Results: Patients (63±10 y.o.-79% male) are 35% active smokers, 34% treated with insulin, 79% with clopidogrel. Mean HbA1c is 7.4±1.2%. No significant difference in mean platelet count, fibrinogen and hsCRP is found between both assessments. Using LTA-AA, mean residual aggregation is 19.3±14.2% with aspirin once daily versus 12.3±11.4% with aspirin twice daily (p<0.001). The rate of biological aspirin resistance decreases from 37.5% with aspirin once daily to 14.2% with aspirin twice daily corresponding to a decrease of biological resistance of 62% (p=0.0005). Interestingly, 20 patients resistant with aspirin once daily became sensitive with aspirin twice daily.

Conclusion: In diabetic patients with high risk of biological aspirin resistance, aspirin twice daily significantly reduces biological “aspirin resistance” measured by LTA-AA.

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Adiponectin levels and long-term mortality in coronary heart disease patients and controls

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Purpose: Despite established insulin-sensitizing and anti-atherosclerotic preclinical effects, epidemiological investigations of adiponectin, an adipocyte derived peptide, have yielded conflicting findings, particularly in long-term prognosis. Therefore, we investigated in a case-control study conducted in men whether serum adiponectin levels are associated with long-term mortality in patients with Coronary Heart Disease and in controls.

Methods: 461 patients and 468 controls aged 55-64 (60.2 ± 8.1 years) were included and followed 6.5 ± 1.2 years. Patients and controls were compared at inclusion and the risk of death was estimated separately.

Results: More prevalent hypertension, diabetes, dyslipidemias, low physical activity, smoking and elevated CRP was observed in patients in comparison with controls. Adiponectin levels were significantly lower in patients (5.7 ± 4.5 vs 7.2 ± 4.6 mg/L, p=0.001). After multivariate adjustment, adiponectin remained related to CHD patients in relation to controls: OR=0.54 (95% CI: 0.30-0.98) for Q2-Q3 (i.e. 3.4-7.9 mg/L) and OR=0.52 (95% IC: 0.31-0.87) for Q4 (8.0 mg/L) versus Q1 (<3.4 mg/L), respectively. After an identical follow-up, CHD patients showed a higher overall mortality rate than controls (n=79 vs n=22 deaths, p=0.001). Risks of death by adiponectin levels were assessed after adjustment for established risk factors. In controls, HR was 1.44 (95% IC: 0.26-7.35) for Q2-Q3 and 2.56 (0.50-13.2) for Q4, compared to Q1. In cases, HR was 2.97 (1.45-6.10) for Q2-Q3 and 7.07 (3.11-16.8) for Q4.

Conclusion: Whereas serum adiponectin levels were higher in controls than in CHD patients, adiponectin was positively related to long-term mortality in both CHD patients and controls. Such paradoxical observation suggests that adiponectin levels could be modified in patients by cardiovascular drugs and goes against a protective effect of adiponectin in vascular disease.

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Comparative analysis of patients with acute coronary and cerebrovascular syndromes from the national French hospitalisation health care system database

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