Abstracts

PCV21

EFFECT OF WEATHER CONDITIONS ON THE MORTALITY OF HEART ATTACKS IN HUNGARY
Kriszbachy I, Böncz I, Sebestyen A, Vas G, Bodis J
1University of Pécs, Pécs, Hungary, 2National Health Insurance Fund Administration, Pécs, Hungary.

OBJECTIVES: Several reports have already proved that the number of deaths related to acute myocardial infarction (AMI) shows a seasonal variation, with a peak in winter, and a lowest rates during the months of summer. The effects of meteorological variables on the human organism have been studied for more than fifty years, and changes in the number of AMI events have been related to both cold or warm temperatures. METHODS: The number of cardiac mortality (N = 16,160) in Hungary shows a steadily decreasing tendency between 2000 and 2005, with a seasonal variation regardless of age or sex. RESULTS: The peak period of AMI mortality was during the months of spring, with a lowest value during the summer. There was a significant difference between seasons (F = 3.027; p < 0.05). The daily average of cardiovascular mortality during each season was the following: 8.48 during spring, 7.23 during the summer, 7.79 during autumn, and 7.76 during winter. The sharp temperature increase during spring, and the similarly significant decrease of temperatures during autumn, both have an increasing effect on heart attack related mortality. Studying the moving average of AMI mortality (k = 7), and the relation with the daily average temperature of the preceding 7 days, we have found a medium value negative correlation (r = −0.466, p < 0.01). Considering the moving average of deaths (k = 7) and the average daily temperature of the preceding seven days above and below 20 Celsius, we have found a significant difference. CONCLUSIONS: The mortality of AMI may be related to the internal biological rhythm of the organism, and also to such external conditions as weather. The combined effect of certain meteorological factors, such as a sudden temperature or atmospheric pressure change, may be considered as a risk factor in the mortality of a heart attack.

PCV22

TOLERABILITY OF ROUVASTATIN 40 MG COMPARED TO 20 MG IN THE TREATMENT OF HYPERCHOLESTEROLAEMIA:
EVIDENCE FROM RANDOMISED CONTROLLED TRIALS
Edwards SJ, Kingslake SL
AstraZeneca UK Ltd, Luton, UK.

OBJECTIVES: To compare the tolerability of rosuvastatin 40 mg with 20 mg in the treatment of patients with hypercholesterolaemia based on a meta-analysis of 9 randomised controlled trials (n = 3314) from the CRESTOR clinical trial programme. METHODS: Data were extracted on the following organ systems: Muscle (rhabdomyolysis, myopathy, myalgia, creatine kinase increase); Liver (liver failure, hepatitis, abnormal liver function [ALT increase]); Renal (renal failure, serum creatinine increase, haematuria, proteinuria). The events analysed were all treatment-emergent adverse events rather than treatment-related adverse events to provide an objective evaluation of any possible difference in risk between rosuvastatin 40 mg and 20 mg. Summary effect estimates were calculated as risk difference (RD) in meta-analyses using a fixed effects model. RD is an absolute measure of the difference in tolerability, i.e. percentages reported are the risk of an event with rosuvastatin 40 mg compared to 20 mg (positive values indicate higher, negative values lower). RESULTS: The event rates were low for all outcomes. For rhabdomyolysis, liver failure, and hepatitis there were no events with either rosuvastatin 40 mg or 20 mg. Other outcomes had the following results—Muscle: myopathy 0.006% (95%CI: −0.266% to 0.279%, p = 0.963), myalgia 0.216% (95%CI: −0.874% to 1.306%, p = 0.697), creatine kinase increase 0.424% (95%CI: −0.099% to 0.947%, p = 0.112); Liver: abnormal liver function 0.189% (95%CI: −0.415% to 0.793%, p = 0.540); Renal: renal failure −0.023% (95%CI: −0.296% to 0.251%, p = 0.871), serum creatinine increase 0.033% (95%CI: −0.239% to 0.305%, p = 0.811), haematuria −0.015% (95%CI: −0.372% to 0.342%, p = 0.936), proteinuria 0.070% (95%CI: −0.274% to 0.415%, p = 0.689). Sensitivity analysis, using random effects model, demonstrated no difference in any of the outcomes except myalgia, for which there was a small numerical difference (0.420%; 95%CI: −1.332% to 2.172%, p = 0.638). CONCLUSIONS: There is no evidence from randomised controlled trials to suggest any difference in tolerability between rosuvastatin 40 mg and 20 mg.

PCV23

WITHDRAWN