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| 3273 | Atrial fibrillation and the ageing population: an emerging epidemic?

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Aims: Atrial fibrillation (AF) is the most common cardiac arrhythmia and an important cause of cardiovascular morbidity and mortality (particularly in relation to stroke and heart failure). This study examined the likely burden of AF in respect to its population prevalence among those aged 45 years or more, in addition to the number of hospital admissions associated with a principal diagnosis of AF in the UK for the period 2000-2020.

Methods: We applied contemporary UK-specific estimates of the population prevalence of AF and the rate of hospital admissions associated with a prinicpal diagnosis of AF (on an age and sex-specific basis), to projected changes in the UK population for the years 2000, 2005, 2010 and 2020. Using recent trends analyses, in addition to population changes alone, we also considered the likely (additional) impact of underlying increases in the prevalence of AF and related hospitalisations.

Results: We estimate that in the year 2000 there were approximately 290,000 men and 254,000 women aged 45 years or more being actively treated for AF in the UK: a combined total of 544,000 individuals representing just under 1% of the UK population overall. Based on population changes alone (i.e. stable prevalence rates) we estimate the number of men and women being treated for AF will have increased by 33% and 18%, respectively, by 2020. If combined with a modest 5% rate increase in the prevalence of AF every 5 years across all age groups (due to a greater burden of contributory cardiovascular disease states), these figures will increase by 54% and 33%, respectively, with about 1.3% of the UK population affected by 2020. In both models, the greatest increases are predicted to occur in the period 2010-2020 because of the ageing "Baby Boomer" population cohort. We also estimate that there were 37,500 male and 38,300 female admissions for AF (principal diagnosis) in the UK during the year 2000. Based on population changes alone, these admissions are predicted to rise by 31% and 16%, respectively, by 2020. If, however, current trends in the rate of increase of such admissions are maintained, these figures are predicted to rise by 395% and 325%, respectively. Once again, the greatest increases are likely to occur between 2010 and 2020.

Conclusions: In this unique study, we have shown that AF already represents a major health problem within the UK population. Furthermore, without substantial changes in relation to its prevention and treatment, the burden of AF (particularly as a precursor of stroke and heart failure) is likely to rise substantially in the next 20 years.

| 3274 | Cardiovascular risk factors and therapeutic management of patients with stable coronary artery disease: a nationwide French survey

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Aims: To assess prevalence and control of cardiovascular risk factors as well as therapeutic management of French patients (pts) with stable coronary artery disease (CAD) in 2001.

Methods: The 6 first consecutive pts with CAD presenting to a cardiologist were included if they met the following criteria: prior acute myocardial infarction (AMI), prior PTCA or CABG or documented stable angina. The following data were collected: demographics, cardiovascular history, risk factors, blood pressure (BP), last record of LDL-cholesterol and cardiovascular therapeutics.

Results: 6349 pts (81% men) aged 67±10 years were included by 795 french cardiologists. Previous risk factors were: hypertension (50%), hypercholesterolemia (75%), current smoking within 3-months period (9%) and diabetes (16%). Previous AMI was observed in 51% of pts and previous angina in 59% of pts. The 140/90 mmHg BP goal was obtained in 56% of pts (41% in pts with treated hypertension vs 70% in pts not receiving antihypertensive drugs for hypertension). BP control in pts with diabetes was only 44%. The LDL-c goal less than 3.4 mmol/l was obtained in 58% of pts (60% in pts treated by lipid lowering agents vs 53% in not treated pts). Aspirin or other antiplatelet agents were used by 84%, statins by 65%, beta-blockers by 64% and Ace-inhibitors by 33% of pts respectively. In pts with prior AMI the use of beta-blockers rose to 68% and the use of ACE-inhibitors to 41%. In pts with diabetes the use of beta-blockers fell to 60% and the use of ACE-inhibitors rose to 47%.

Conclusion: ESPOIR was a nationwide study representative of french pts with stable CAD. Prevalence of modifiable risk factors remains high and blood pressure as well as cholesterol goal were not satisfactorly achieved. A slow incorporation of secondary prevention strategies was observed mainly regarding the use of ACE-inhibitors.

| 3275 | The associations between climatological variations and cardiovascular mortality, in greater Athens area, during 15 years period (1987–2001)

D.B Panagiotakos[1]; A.G. Paliatsos[2], P.T. Nastos[3], C. Chrysohoou[1], C. Pitsavos[1], C. Stefanadis[4], V.P. Tritakis[5], P.K. Toutouzas[4]. [1]*University of Athens, School of Medici, Cardiology Clinic, Athens, Greece;* [2]*Technological Educational Institute of, Department of Mathematics, Piraeus, Greece;* [3]*University of Athens, Department of Bioclimatology, Athens, Greece;* [4]*Veterans Affair Hospital, Cardiology Division, Washington, United States of America;* [5]*Academy of Athens, Research Institute of Astronomy, Athens, Greece*

Background: The fact that environmental conditions are associated with the pathogenesis of physical disease was known as early as the time of Hippocrates. The aim of this study is to evaluate the association between climatological variations, with cardiovascular mortality, on the greater Athens area inhabitants.

Methods: We studied mean monthly values of air temperature and relative humidity (data from the National Observatory of Athens) as well as the cardiovascular mortality (local registers), during 1987-2001. In order to evaluate the association between cardiovascular mortality and the climatological variations we applied a special, empirically determined temperature-humidity index (T.H.I.), suggested by E. C. Thom (T.H.I. = Ta - 0.55*(1 - 0.01 RH)*(Ta - 14.5), Ta = mean monthly dry-bulb air temperature in oC, RH = mean monthly relative humidity in %). Statistical analysis was based on Poisson regression models, after taking into account the effect of age group, seasonality, air pollution, and the number of holidays and strikes (confounders).

Results: An age-adjusted positive trend in CHD mortality was observed during the investigated period (+26% in all ages, $p < 0.001$ and +32% in >75 years old group, $p < 0.001$). Additionally, CHD mortality was positively related with relative humidity ($p < 0.001$) and inversely associated ($p < 0.01$) with mean air temperature, during the studied period. Moreover, a consistent association between T.H.I. and CHD deaths was found (b=-0.72, $p < 0.001$), with more significant results in the elderly ($p < 0.0001$). In particular, a 10-unit decrease in the T.H.I. scale raises by 20% the monthly cardiovascular mortality ($p < 0.001$), while T.H.I. < 24 increase by 53% the risk (odds ratio = 1.53, $p < 0.05$) of observing the daily number of cardiovascular deaths in the upper quartile (i.e. > 42 deaths/day) compared to the lower quartile (i.e. < 29 deaths/day).

Conclusions: Our findings suggest that a strong association between climatological variations and CHD mortality seems to exist. The suggested cut-off point of 24 in the T.H.I. scale could be a useful tool in public health practice, in order to reduce mortality rates, especially in countries with extreme environmental phenomena. The previous findings are in accordance to the reports from other studies, especially, in the US, but it is hard to claim that they support evidence for causality. Thus, further research is needed in order to investigate the mechanisms by which environmental conditions affect CHD mortality.

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Topics:
Epidemiology/prevention, other

Trends in cardiovascular disease in Europe

Chairpersons: R. Masia Martorell (Girona, ES); J. Muntwyler (Zurich, CH)

Berne (Blue Zone)

Wednesday, 04 September, 2002 12:00