Methods

(i) Two multicentre randomized controlled trials of patients following acute myocardial infarction (MI) in representative patient populations and with minimal exclusions (2328 and 2144 patients respectively).

(ii) Two systematic reviews of trials with examination of heterogeneity, meta-analysis, and time trend analysis.

Results

(i) Our multicentre trials show little effect on (i) clinical outcomes, for example, combined cardiac end points, relative risk (with 95% confidence limits) 0.95 (0.83, 1.09) and 0.93 (0.79, 1.10), (ii) morbidity, for example, depression standardized mean difference $-0.04 (-0.29, 0.21)$ and $0.00 (-0.28, 0.29)$, (iii) quality of life or, (iv) risk factors, for example, smoking, rehabilitation versus controls 24 versus 23% and 17 versus 17%.

(ii) Systematic reviews show heterogeneity of programme content, trial design, and outcome measurement and identify only one other recent trial >2000 patients. Meta-analyses show little effect on mortality of exercise-based CR in the past 20 years, since introduction of effective pharmacotherapies, relative risk 0.98 (0.81–1.20) or in psychologically-based CR, 0.95 (0.83–1.09). Few trials report on risk factors or lifestyles and few include patients, representative of those now offered CR.

Conclusions

In the present era of early lysis or revascularization and secondary prevention medication, there is little evidence that exercise-based or stress management CR offers significant additional benefit following MI. There is less evidence of effect following revascularization or in chronic stable angina. Large trials relevant to current clinical practice are indicated.

The EUROCISS project: development of cardiovascular morbidity indicators for the European Community

Simona Giampaoli

M Madsen, P Primatessa, A Pajak, S Sans on behalf of the EUROCISS Research Group
National Institute of Health, Rome, Italy
*Contact details: sgiampi@iss.it

Issue

In Europe cardiovascular diseases (CVDs) represent the leading cause of mortality, morbidity, and disability. Their frequency and distribution differ largely among countries. A surveillance system based on the collection of comparable and valid data is essential for evaluating the burden of CVD, their trends, and geographical distribution, and for planning and implementing appropriate preventive actions. This is the objective of EUROCISS project.

Description

The EUROCISS project (European Cardiovascular Indicators Surveillance Set) was set up in 2000 by a partnership of European Union countries and supported by the European Commission within Health Monitoring Programme. EUROCISS has identified which CVDs are of importance in public health, defined specific indicators for assessing morbidity and developed recommendations for collection of data easily applicable within member states. At present, the EUROCISS research group is preparing manuals of operations for implementing population-based registers of acute myocardial infarction (AMI) and stroke and detailed procedures and methods for implementation of CVDs surveys. Eighteen countries (Austria, Belgium, Finland, France, Germany, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, United Kingdom, the Czech Republic, Denmark, Greece, Hungary, Iceland, Poland) are involved.

Lessons

For monitoring CVDs, population-based registers provide attack/incidence rates and fatality for AMI and stroke, while surveys are essential for assessing prevalence of ischemic heart disease and heart failure; therefore registers and CVDs survey need to be implemented.

Conclusions

A surveillance system based on the collection of comparable and valid data is essential for evaluating the burden of CVDs, their time trends, and geographical distribution, and for planning and implementing appropriate preventive actions.

A randomized non-pharmacological intervention study for prevention of ischaemic heart disease. INTER99

Torben Joergensen1,*, H Ibsen2, K Borch-Johnsen1, T Thomsen1, C Pisinger1, C Glümer3, S Ladefoged1
1Research Centre for Prevention and Health, Glostrup, Denmark
2Medical Department, Glostrup University Hospital, Glostrup, Denmark
3Steno Diabetes Center, Gentofte, Denmark
*Contact details: torbjo1@glostruphospital.kbhhmtd.dk

Background

To evaluate the effect of a population-based screening and non-pharmacological intervention for prevention of ischemic heart disease (IHD) in the frame of a medical technology assessment.

Methods

A total of 13 016 persons randomly selected from the background population were invited for a risk assessment for development of IHD by means of a computer programme (PRECARD). According to predefined criteria, participants were classified into a high-risk and low-risk group. Individuals were a priori randomized to receive a low intensity intervention or a high intensity intervention. Interventions were made in three waves (at base line, after 1, and after 3 years). Intervention focused on smoking cessation, increase in physical activity, and change in diet. Effect was calculated as change in lifestyle habits, biological risk factors, and absolute risk of IHD.

Results

Participation rate at baseline was 52% ($N = 6784$). A total of 60% fulfilled the criteria for lifestyle intervention and had a health counselling talk. Nearly half accepted group-based intervention during a 6-month period. 62% of the high-risk population was re-examined after 1 year. About one fifth stopped smoking. More persons in the intervention groups stopped smoking and increased physical activity and intake of prudent diet compared to the background population. Systolic blood pressure and the estimated risk of IHD decreased significantly more in the high-intensive intervention group compared to the low-intensive intervention group ($P < 0.05$).

Conclusions

There is an increasing need for lifestyle counselling in the population. The present study shows a positive effect of population-based screening and intervention after 1 year.

Cardiovascular prevention in the Hartslag Limburg project: effects of a high-risk approach on behavioural risk factors in a general practice population

Janneke Harting

J Harting1,*, P Van Assema2, P Van Limpt4, T Gorgels2, J Van Ree2, R Ruland3, F Vermeer3, NK De Vries1
1Department of Health Education and Promotion, Maastricht University, The Netherlands
2Department of General Practice, Maastricht University, The Netherlands
3Department of Cardiology, University Hospital Maastricht, The Netherlands

*Contact details: jharting@maastrichtuniversity.nl
programme will act as a template for the development of occupational back services in both national and international contexts.

**Cardiovascular registers in Europe: results from EUROCIS project**

Simona Giampaoli

S Giampaoli*, M Madsen, P Primastesta, A Pajak, S Sans on Behalf of the EUROCIS Project Research Group
National Institute of Health, Rome, Italy

*Contact details: sgampa@iss.it

**Background**

The EUROCIS project (European Cardiovascular Indicators Surveillance Set) is part of the Health Monitoring Programme of the European Commission and has been implemented to develop health indicators and make recommendations for monitoring cardiovascular diseases (CVDs). The objectives of the project included are as follows: (i) identify CVDs of importance in public health; (ii) identify specific indicators for assessing morbidity; and (iii) develop recommendations for collection and harmonization of data. One of the main goals of the second phase of the project is to list the population-based registers existing in the 18 member countries, describe their methods, and discuss their comparability.

**Methods**

Using a questionnaire, the following information on acute myocardial infarction from population-based registers was collected: disease population characteristics (geographical area, temporal duration, age range), methods (case definition, ICD codes), procedures (record linkage and validation methods); morbidity indicators (attack rate, incidence, case fatality rate).

**Results**

Out of 16 countries with available data up to now, 6 have no population-based registers. Ten countries have regional population-based registers; 3 of them have a national register as well. These registers differ from each other for ICD codes used in the definition of fatal and non-fatal events, age range, record linkage, years covered, and validation procedures. These differences make attack rate and incidence difficult to compare.

**Conclusions**

When population-based registers cover representative areas of the country, they provide the best indicators for AMI, such as attack rate, incidence, and case fatality. Given the high burden of AMI, efforts are needed for implementing registers in all European countries.

**Trends in prevalence of lifestyle related cardiovascular risk factors in Latvia**

Iveta Pudule

I Pudule1, A Villerusa2, D Grinberga1, I Jece1

1Health Promotion State Agency, Latvia
2Riga Stradin’s University, Latvia

*Contact details: iveta.pudule@vva.gov.lv

**Background**

Mortality from cardiovascular diseases (CVD) is the leading cause of death in Latvia. The standardized death rates (SDR) for CVD among men aged 0–64 years in Latvia has been one of highest among the European counties. The rate almost doubled between 1986 and 1994, but since then the SDR has decreased to the level of the 1980s. Despite this improvement, it is still more than tree times EU average. The main reason for this is lifestyle: smoking, high alcohol consumption, less than optimal diet and lack of exercise. The pattern is similar for women, although the SDR among women is much lower. To elaborate state CVD policy health behavior monitoring system is established.