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Differences in presentation and management of Stable Angina from East to West in Europe: A comparison between Poland and the UK ☆

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Abstract

Aims: Variations in the resources, stability and priorities of health care systems conceivably affect their capacity to implement health care reform and ensure an evidence based approach to health care. Such variation may partially account for differences in cardiovascular mortality rates between former communist states in Central Europe and Western European countries, but specific data on this subject is sparse. The aim of this study was to compare the presentation of stable angina to cardiology services in Poland vs. the United Kingdom, the management of the condition in relation to existing European guidelines and clinical outcome.
Methods and results: Data was collected as part of a prospective observational cohort study of stable angina in Europe. Information was recorded on referral patterns, clinical presentation and the use of pharmacological therapies, investigations, revascularisation and cardiovascular events during 1 year of follow up. A total of 571 patients with stable angina were enrolled in Poland and 319 in the UK. Patients presenting to cardiology services in Poland were less likely to be referred by a primary care physician, younger, and had more adverse clinical risk predictors at presentation. Non-invasive investigation and coronary angiography were performed less frequently in Poland, but waiting times for invasive assessment were shorter. European guidelines with regard to the use of evidence based secondary preventative medical therapy were applied widely by cardiologists in both countries. No differences were observed in rates of cardiovascular events.
Conclusions: The use of evidence based pharmacological therapy was equally high in both countries, but guidelines regarding investigation were less completely adhered to in Poland, where invasive assessment and subsequent management was prompt but only performed in a highly selected proportion of the population with stable angina.

Keywords: Stable angina; Geographical variation; Health care provision; Revascularisation rates

1. Introduction

Data collated by the World Health Organization [1] demonstrates a wide variation in cardiovascular mortality rates between different regions and countries in Europe. There has been a steady reduction in age and gender standardised

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mortality rates in Western Europe [2], and more recently, a downturn in mortality in certain central European countries, including Poland, but increasing cardiovascular mortality rates have been observed in some Eastern European countries such as the Ukraine and Bulgaria. Data from the MONICA project [3,4] and other sources [5] has shown that observed reductions in coronary disease morbidity and mortality relate to a combination of a reduction in risk factors at population level, and improvements in treatment of those with existing disease. The relative contributions of differences in risk factors and treatment patterns to variations in cardiovascular mortality observed between former communist states [6–8] and Western Europe [5], and how this will affect the development of public health policy at EU level remains a matter for debate.

The current report examines the results of the Euro Heart Survey of Stable Angina, one of a programme of systematic surveys [2] of cardiovascular conditions established by the European Society of Cardiology, in Poland and the UK. The aim is to ascertain the similarities and differences between these populations from Central and Western Europe respectively in terms of presentation, management and outcome of stable angina in order to further inform this debate.

A description of the patterns of presentation and management would not be complete without an introduction to models of care for chest pain in both systems. Although the health care systems in Poland and the UK are quite different, the patient pathway with a stable chest pain syndrome is quite similar. In Poland if the patient presents to the primary care physician, a resting ECG and serum lipids are possible within health insurance. The primary care physician may continue to treat the patient on his own, or refer the patient to cardiologist if feels further diagnostics (e.g. exercise test, echo, holter) are necessary. This model is very much like the old UK model, however, more recently in the UK system there has been a concerted drive to ensure more investigation of angina, with the National Service Framework for Coronary Heart Disease setting the target for all patients with new angina to be seen by a cardiologist for further investigation. In general primary care doctors will perform lipid tests and some may also perform a resting ECG.

If a patient with chest pain in Poland calls an ambulance they are assessed by the emergency physician in the ambulance, and triaged appropriately to the emergency department of nearest hospital, or directly to a centre with interventional facilities if the diagnosis of acute coronary syndrome (ACS) is definite. If the emergency physician in the ambulance diagnoses stable angina he refers the patient to his primary care physician. A patient presenting directly to an emergency department is similarly triaged. In the UK there is not an equivalent to an ambulance emergency physician, and in general patients are brought to their nearest hospital except in areas where there is a well developed primary angioplasty service where patients with ST elevation are brought directly to the interventional centre.

Patients were included in this survey who presented directly to, or had been referred to cardiologists for further assessment and or treatment of stable, with similar availability of investigations in primary care.

2. Methods

2.1. Patient population

Details of population selection and data collection have been described [9]. Briefly the survey included community based patients with stable angina on a new presentation to a cardiologist. A new presentation of stable angina was defined as a first ever presentation, or new referral or re-referral, after a period of at least 1 year of not attending or consulting a cardiologist. Patients were suitable for inclusion if the cardiologist made a diagnosis, based on clinical assessment, of stable angina, caused by myocardial ischaemia due to coronary disease. Consent to be included in the survey was obtained from all patients in the manner deemed appropriate by the local regulatory authorities.

2.2. Data collection

Data collection for the initial survey commenced in March 2002 and continued until December 2002. Demographics, clinical features at presentation, investigations performed or planned by the cardiologist, and the initial treatment recommended were recorded along with results of investigations performed within 4 weeks of the initial assessment. Definitions are reported in Appendix A.

2.3. Follow up

Follow up was by personal or telephone contact with the patients as close as possible to 1 year after initial assessment. The medical records of the patient were also reviewed, and information regarding clinical events or investigations verified from these records. Vital status was ascertained at follow up in 76% of patients in the UK and 86% in Poland.

2.4. Statistical analysis

Descriptive statistics were used to estimate the prevalence of risk factors, baseline clinical characteristics and treatment at presentation. The Students t test was used to test differences in quantitative measures, and the χ^2 test was used to test differences in proportions. Regression analysis was employed to determine the odds ratios for the use of revascularisation techniques. The log rank test was employed to determine differences in rates of individual clinical endpoints during follow up. Clinical events were considered individually, and as a combined endpoint, all cardiovascular events, which included cardiovascular death, MI, stroke, hospitalisation for unstable angina or heart failure, or