ASPIRE-2-PREVENT

Lifestyle and risk factor management and use of cardioprotective medication in coronary patients in the UK

Dr Kornelia Kotseva
National Heart & Lung Institute, Imperial College London

on behalf of all investigators participating in the British Cardiovascular Society Survey of Preventive Cardiology Care in the UK
Declaration of interest

The A-2-P survey was funded by Merck Sharp and Dohme (MSD) with a grant to Imperial College

It is part of a wider international MSD survey called DYSIS: Dyslipidaemia International Survey
A British Cardiac Society survey of the potential for the secondary prevention of coronary disease:
ASPIRE (Action on Secondary Prevention through Intervention to Reduce Events)

Principal results

ASPIRE Steering Group

Abstract
Objective—To measure the potential for secondary prevention of coronary disease in the United Kingdom.
Design—Cross sectional survey of a representative sample of coronary patients from a retrospective review of hospital
achieved by effective lifestyle intervention, the rigorous management of blood pressure and cholesterol, and the appropriate use of prophylactic drugs.

(Heart 1996;75:334–342)
Objective

To determine in patients with established coronary disease whether the JBS2 and NICE guidance on cardiovascular disease prevention are being followed in everyday clinical practice.
Heart

JBS 2: Joint British Societies’ Guidelines on Prevention of Cardiovascular Disease in Clinical Practice

Prepared by:
British Cardiac Society
British Hypertension Society
Diabetes UK
HEART UK
Primary Care Cardiovascular Society
The Stroke Association

www.heartjnl.com
ASPIRE-2-PREVENT
Geographical areas and sampling frame

Stratified random sample of hospitals

12 geographical regions of the UK:
- 9 English health regions
- Northern Ireland
  - Wales
  - Scotland

18 hospitals
Study population

Consecutive patients, men and women < 80 yrs, with first or recurrent diagnosis of CHD at least 6 months and at most 3 years prior to identification

- Elective or emergency CABG (this includes emergency CABG for AMI)
- Elective or emergency PCI (this includes emergency PCI for AMI)
- Acute Myocardial Infarction (AMI) (ST-elevation or non-ST elevation MI)
- Acute Myocardial Ischaemia (Ischaemia) but NO evidence of AMI (Troponin negative)
- Exertional angina
Data collection

• Centrally trained research nurses
• Retrospective identification of patients
  • Review of medical records
• Patient interview and examination at least 6 months after admission or procedure
• Standardised methods and instruments
  • Bioclinical measurements
    → height, weight, waist
    → blood pressure
    → breath CO
  → venous blood sample for total cholesterol, HDL cholesterol, triglycerides, glucose
Results

• 1,523 coronary patients identified

  • 681 interviews

• Interview participation rate 45%

  • 74.6% men

• Mean age 64.2 (SD 9.5) years
Distribution by diagnostic category

Men

- UA: 14%
- SA: 9%
- CABG: 17%
- PTCA: 35%
- AMI: 26%

Women

- SA: 16%
- CABG: 6%
- PTCA: 27%
- AMI: 27%

All

- UA: 14%
- SA: 16%
- CABG: 14%
- PTCA: 33%
- AMI: 26%
Prevalence of smoking, overweight and obesity

<table>
<thead>
<tr>
<th></th>
<th>ALL</th>
<th>MEN</th>
<th>WOMEN</th>
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<tbody>
<tr>
<td>Smoking*</td>
<td>13.5%</td>
<td>14.0%</td>
<td>12.1%</td>
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<tr>
<td>Persistent smoking**</td>
<td>47.4%</td>
<td>48.0%</td>
<td>45.7%</td>
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<td>BMI ≥ 25 kg/m²</td>
<td>77.5%</td>
<td>80.8%</td>
<td>67.7%</td>
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<td>BMI ≥ 30 kg/m²</td>
<td>34.1%</td>
<td>33.5%</td>
<td>35.9%</td>
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<tr>
<td>Central obesity***</td>
<td>76.0%</td>
<td>73.8%</td>
<td>82.4%</td>
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</table>

*Self-reported or CO in breath > 10 ppm; ** Among patients smoking at the time of coronary event; ***WC ≥ 94 cm (men); ≥ 80 cm (women)
Prevalence of raised blood pressure, elevated total cholesterol and LDL-cholesterol

BP $\geq 130/80$ mmHg
TC $\geq 5$ mmol/L
TC $\geq 4$ mmol/L
LDL-C $\geq 3$ mmol/L
LDL-C $\geq 2$ mmol/L

ALL: 47.0% 16.0% 52.4% 13.1% 55.8%
MEN: 48.1% 13.4% 47.5% 12.1% 53.0%
WOMEN: 43.9% 24.0% 67.1% 16.4% 64.4%
Prevalence of self-reported and undiagnosed diabetes

- **Self-reported diabetes**
  - ALL: 18.0%
  - MEN: 17.5%
  - WOMEN: 19.2%

- **Undiagnosed diabetes**
  - ALL: 4.0%
  - MEN: 4.8%
  - WOMEN: 1.7%

- **Diabetes**
  - ALL: 22.0%
  - MEN: 22.3%
  - WOMEN: 20.9%
Therapeutic control of blood pressure*, total cholesterol**, LDL-cholesterol** and diabetes***

*Among patients on BP lowering medication; **Among patients on lipid-lowering medication; *** Among patients with self-reported diabetes
# Cardioprotective medication

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<th>Medication</th>
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<tr>
<td>Antiplatelets</td>
<td>95.4%</td>
<td>96.0%</td>
<td>93.6%</td>
<td>74.8%</td>
<td>75.5%</td>
<td>72.7%</td>
<td>78.9%</td>
<td>79.8%</td>
<td>76.2%</td>
<td>17.6%</td>
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<td>Beta-blockers</td>
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<td>ACE/ARB</td>
<td>92.8%</td>
<td>93.4%</td>
<td>91.3%</td>
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**Imperial College London**
Conclusions

• Lifestyle of coronary patients in the UK continues to be a major challenge with high prevalences of persistent smoking, obesity and central obesity
• A majority of coronary patients have a blood pressure, total and LDL-cholesterol above target
• Blood pressure, lipid and glucose control are inadequate with most patients not achieving the targets defined in the prevention guidelines
• Secondary prevention needs a systematic, comprehensive, multidisciplinary approach, which addresses lifestyle, risk factor and therapeutic management, and a health care system which invests in prevention.
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“To salvage the acutely ischaemic myocardium without addressing the underlying causes of the disease is futile; we need to invest in prevention.”

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