

P1255 Effects of morbidity, age, gender and region on percutaneous transluminal coronary angioplasty utilization

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Objectives: To investigate changes of PTCA application in respect to morbidity, gender, region and age. To investigate the morbidity as reason for geographical variation.

Study Design: Retrospective record linkage study.

Setting: All hospitals and cardiological centres (n = 156) which performed the Minimum Basic Data Set (MBDS).

Patients: All Austrian residents who were diagnosed for myocardial infarction, coronary heart disease or angina pectoris in 1993–1995 (1993: n = 73.077, 1994: n = 80.173, 1995: n = 84.896).

Results: The intervention rate (IR = PTCA/indication) increased from 0.03 to 0.04 (33%) between 1993 and 1995 with differences in genders (males: 24%, females: 27.7%) and regions (Vorarlberg: –7.5%, Burgenland: 65.3%). Male morbidity started to increase at about 60 years and female morbidity about 10 years later. Morbidity as demand factor did not correlate with PTCA application. The IR was significantly lower for females in Austria in general (p < 0.001) and in every Federal State (p < 0.001). This pattern was constant during 1993 to 1995 with the highest difference in Salzburg and the lowest in Styria. Austrian men received about three times more likely PTCA application than females (crude Odds Ratio = 2.8, 95%CI = 2.6–3, p-value < 0.001). Logistic regression modelling revealed age as main confounder (adjusted Odds Ratio = 1.36, 95%CI = 1.31–1.42, p < 0.001). The ≥5% intervention rate peak was between 30 to 75 years for males and between 30 to 65 years for females whereas morbidity of ≥1% started for males at about 50 years and for females at about 60 years. Marked geographical differences of the intervention rate were observed (Upper Austria, Salzburg IR = 0.07, Styria IR = 0.02) but could not be explained by the demand factor morbidity (Pearson's correlation coefficients 1993: 0.039, p = 0.71; 1994: 0.155, p = 0.133, 1995: 0.087, p = 0.399).

Conclusion: Highest intervention rates were in age groups with low morbidity. Females received significantly less interventions than men in respect to age and region. The demographic strata of lowest utilization rate were women aged 64 years and more. Marked geographical differences of PTCA application were stated but could not be explained by the demand factor morbidity. Further studies on supply factors as well as on economic and social factors are of need to develop public health strategies in order to guarantee equal utilization rates for the whole Austrian population.

P1256 Impact of acute myocardial infarction on quality of life 4 years after myocardial infarction: an analysis using the Short Form 36 health survey

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Quality of life (QOL) is increasingly recognised as an important health outcome post myocardial infarction (MI) although the results of reports to date are discrepant probably due to patient selection. Based on a heart attack register 476 four-year survivors of a MI in 1992 were mailed a questionnaire containing the Short Form 36 health survey (SF-36), and the Rose angina and dyspnoea questionnaires. Response rate was 89.1%. The characteristics of responders and non-responders were similar.

Compared to age and sex adjusted norms, MI survivors under 65 years exhibited significant impairment in all 8 domains of the SF-36. In no domain did the 95% confidence intervals (95%CI) overlap. The largest mean differences (around 20 points) were in physical functioning, role physical and general health; differences regarded as clinically important by the SF-36 designers. In those over 65 years, SF-36 scores were similar to community norms with only a small (7 points) non-significant difference with lower physical functioning scores in MI survivors; 95% CI widely overlapping.

To determine factors associated with impaired QOL we fitted multiple regression models incorporating demographic data (age, sex etc.), details of severity of initial MI, previous MI, recurrent events, interventions during follow up, current symptoms and treatment into the models. Impaired QOL was closely associated with an inability to return to work through ill-health, need for coronary revascularisation, the need for two or more angina drugs, frequency of chest pain 2 or more times per week, a dyspnoea score of 2 or more and current treatment with anti-arrhythmics, inhalers (surrogate marker for chronic lung disease) or anxiolytics/hypnotics.

Conclusions: Compared to community norms, the impact of MI in 4 year survivors is greatest in patients under 65 years. Impaired QOL was reported by patients unable to return to work, those with angina and dyspnoea, patients with co-existent lung disease and anxiety/sleep difficulties. These results have consequences for the longer-term management of the post MI patient suggest-

ing a need for improved symptom control and more attention to rehabilitation especially in younger survivors.

P1257 Attenuated population risk profile in former MONICA regions

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Despite a decrease in total and cardiovascular mortality in particular in the last decade, CVDs account for 56% of total mortality in the Czech Republic.

Three cross-sectional surveys were conducted within the MONICA Project in six Czech districts in 1985, 1988, and 1992. In 1997, another population survey was performed in five of the original districts ("old districts") and in two other districts ("new districts"). The aim of the study was to compare the prevalence of CV risk factors in these two different regions and to evaluate the long-term trends in the "old districts" (1985, 1988, 1992, 1997).

Methods: A 1% random population sample (aged 25–64, mean age 45 yrs) in 7 districts in the Czech Republic was screened for CV risk factors in 1997.

Results:

	"Old districts" (n = 1734)	"New districts" (n = 717)	p
Smoking, %	31.8	31.4	NS
SBP, mmHg	128.0 ± 17.7	129.3 ± 16.1	NS
DBP, mmHg	81.7 ± 10.2	83.1 ± 10.2	0.01
Antihypertensive therapy, %	17.6	15.1	NS
Hypertension, %	35.9	34.9	NS
Tot. cholesterol, mmol/L	5.6 ± 1.17	5.9 ± 1.25	0.001
TG, mmol/L	1.74 ± 1.39	1.88 ± 1.41	0.05
HDL-cholesterol, mmol/L	1.39 ± 0.36	1.38 ± 0.38	NS
LDL-cholesterol, mmol/L	3.45 ± 1.02	3.70 ± 1.08	0.001

In the "old districts", a statistically significant decrease in mean BP was achieved resulting in a decreased prevalence of hypertension; there was also an improvement in the lipid profile over the 12-year period.

Conclusions: In the "old districts", better control of hypertension and a better lipid profile were found. A repetitive screening in a population may affect both the population and the physicians resulting in an attenuated risk profile in the former MONICA regions.

P1258 The project "LIFE" study: preventive strategies used to reduce cardiovascular risk and improve cardio-respiratory fitness within corporate chief executives

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This project was designed to target chief executive officers (CEO's) from the city of Toronto, Canada, initially assessing their cardiovascular risk and cardio-respiratory fitness with the intention of improving their clinical/physiological profiles, following a comprehensive 6 month intervention.

Methods: 69 CEO's (66 male, 3 female; \bar{x} age, 49 years) were recruited for this study. Pre-study, all subjects cycled on a stationary ergometer to maximum volitional exhaustion and were monitored using full 12 lead electrocardiographic and respiratory gas analysis. Blood lipid and body composition measurements were also taken. Where appropriate further investigations were conducted using nuclear medicine perfusion imaging. Subsequently, an intensive programme focusing on exercise, nutrition and behavioural interventions was undertaken. This was followed post project, by a full physiological/clinical assessment as previously described.

Results: Improvements in peak oxygen uptake, (\bar{x} 2.42–2.76 litres min⁻¹ p < 0.001) and minute ventilation (\bar{x} 91–105 litres min⁻¹ p < 0.001) were recorded post project, together with significant reductions in total cholesterol (\bar{x} 5.54–5.25 mmol L⁻¹ p < 0.01) and LDL cholesterol (\bar{x} 3.4–3.18 mmol L⁻¹ p < 0.01) and % body fat (\bar{x} 22.9–21.2% p < 0.01). There were several clinical complications identified within this group including a case of uncontrolled atrial fibrillation and 4 positive stress ECG's receiving subsequent cardioliote/thallium scintigraphy. In addition, there were positive improvements in behavioural status, specifically related to exercise, following this 6 month intervention (p < 0.001).

Conclusion: Significant improvements in cardio-respiratory fitness and behavioural status accompanied by reductions in recognised cardiac risk factors were evident in this group of high profile executives. The impact of such findings has the potential to benefit a much wider corporate market.