Increased mortality among individuals with widespread chronic pain explained by lifestyle factors

- a prospective Swedish study

Andersson HI, Ejlertsson G.
Department of Health Sciences, Kristianstad University, Sweden

Conclusion

Increased mortality among individuals with widespread chronic pain could partly be explained by exposure to negative lifestyle factors. Rehabilitation of chronic pain should also address lifestyle factors. It remains to show whether health promotion activities could change the prevalence of pain symptoms and mortality of groups with chronic pain.

Background

Chronic pain is a prevalent symptom, with 20–30% point prevalence among adults, which represents a threat to public health all over Europe. Widespread chronic pain has been related to disability and loss of quality of life, but in a few epidemiological studies also to increased mortality.

Aim

To further investigate the relationship between chronic pain and mortality and its causes.

Results

During the study period 189 (11.7%) individuals died. Individuals with widespread chronic pain showed an increased mortality risk (hazard ratio, HR = 1.95, CI 1.26–3.03) compared to the group without chronic pain. Total mortaliy and cause-specific mortalty (cardio-vascular causes 41%, malignancies 32% and other causes 27%) corresponded with national data. Mortality rates and hazard ratios for different groups of pain report are shown in figures and tables.

Methods

A random sample of an adult (age 25–74) Swedish population (n =1609) responded to a comprehensive questionnaire on pain, other symptoms, lifestyle, work and socioeconomic factors in 1988. Mortality data for this cohort between 1988 and 2002 was obtained from the national register of causes of death. Survival analysis (Kaplan-Meier) and Cox proportional regression were used to study initially reported factors influencing survival.

Definitions
✳ Chronic pain – persistent or recurrent pain with more than three months duration.
✳ Widespread pain – at least five pain areas noted on a pain mannequin with maximum 12 locations.
✳ Located pain – chronic pain reported from 1 – 4 pain locations of the pain mannequin.

Mortality risk (hazard ratio), total and cause-specific, in individuals with widespread pain compared with the group without chronic pain. Crude and adjusted HR for possible confounders by Cox regression.

Hazard ratio (95% Cl)		Confounders
1.95	(1.26-3.03)	crude
1.54	(1.01-2.35)	age and sex

Cause-specific hazard ratio		
cardio-vascular	**2.17**	(1.10-4.30)
malignancy	1.21	(0.53-2.73)
others	1.16	(0.45-2.99)

1.41	(0.86-2.32)	+ chronic disease
1.17	(0.65-2.09)	+ perception of stress and insomnia
1.09	(0.62-1.90)	+ smoking, physical activity

Explanatory variables of mortality in the final regression model.

Smoking	**2.69**	(1.59-4.56)
Low physical activity	**1.69**	(1.11-2.38)
Increasing age	**1.12**	(1.09-1.14)

Increased but non-significant hazard ratios		
Ex-smoking	1.40	(0.82-2.38)
Stress	1.38	(0.89-2.16)
Insomnia	1.33	(0.85-2.09)

Survival (Kaplan-Meier) of the groups with no pain report (A), located pain (B) and widespread pain (C)
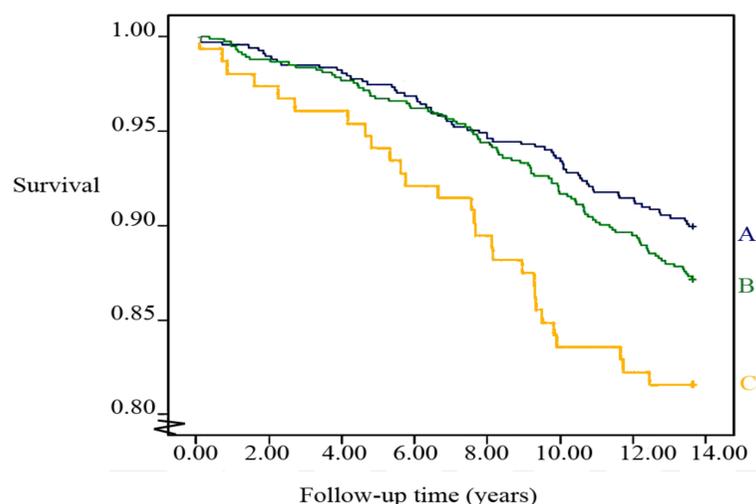
Mortality rates (adjusted by age and sex) in relation to initially reported pain

MAN — HEALTH — SOCIETY