

HEALTH IMPACT OF CHRONIC PAIN: A COHORT RECORD LINKAGE STUDY

Researchers

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Aim

To examine the association between chronic pain and
i) the use of hospital services
ii) cancer incidence
iii) mortality

Project Outline/Methodology

A record linkage study between an existing dataset of approximately 7000 individuals established in 1996 (the Grampian cohort) and routinely collected national datasets on hospital use, cancer, and mortality. Data from 1996 to 2006 were examined.

Key Results

Individuals with chronic pain were significantly more likely to have been both an outpatient and an inpatient/day case than those without chronic pain. They were also significantly more likely to have had at least one visit to 18 of the 25 hospital specialties examined, with this relationship strongest amongst those with severe chronic pain. There were fewer differences in the number of visits and total number of days visited.

There were no significant associations between any chronic pain and cancer incidence after adjustment. Chronic pain reportedly caused by arthritis or cancer was significantly associated with an increase in the incidence of Lymphoma/Leukaemia after adjustment. No other significant associations between cancer incidence and chronic pain were found.

Those with any chronic pain were significantly more likely to die over the subsequent ten years than those without chronic pain. Any chronic pain was significantly associated with cause-specific mortality, and certain types of chronic pain were associated with all-cause and cause-specific mortality after adjustment. There was a strong association between chronic pain severity and mortality: those with severe chronic pain were significantly more likely to die than those with mild chronic pain for all-cause, all circulatory system deaths and ischaemic heart disease after adjustment.

Conclusions

Those with chronic pain (particularly severe chronic pain) were more likely to have used hospital services, but did not tend to visit more often or have longer stays. There was little association between chronic pain and cancer incidence suggesting that those with chronic pain were not at increased risk of developing cancer. There was a strong association between chronic pain (particularly severe chronic pain) and mortality, with a reduced ten-year survival rate.

What does this study add to the field?

This is the first UK study to examine the relationship between chronic pain and hospital use. Previous studies examining the relationships between chronic pain and cancer/mortality have reported conflicting results. We found little association with cancer, but a strong relationship with mortality. Our findings provide new insights into the longer-term health outcomes and impact of chronic pain.

Implications for Practice or Policy

Our findings will help to determine where future interventions may be targeted, and will help to inform the amount and nature of future healthcare provision required for those with chronic pain. Recent reports have recommended the formal recognition of chronic pain as a clinical entity in its own right, and for increased provision for Chronic Pain Services in Scotland. This study confirms the importance of these new services.

Where to next?

Confirmatory research on the impact of chronic pain in other datasets is required as the current evidence is not conclusive. Further research is also required to explore the reason for the strong associations that we have found. Finally, prospective studies are needed to determine the nature of the association and address the question of cause and effect.

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