

People seeking treatment for a new episode of neck pain typically have rapid improvement in symptoms: an observational study

Andrew M Leaver¹, Christopher G Maher², James H McAuley³, Gwendolen Jull⁴, Jane Latimer² and Kathryn M Refshauge¹

¹Faculty of Health Sciences, The University of Sydney, ²The George Institute for Global Health, The University of Sydney, ³Neuroscience Research Australia, ⁴Division of Physiotherapy, The University of Queensland Australia

Question: What is the clinical course of a new episode of non-specific neck pain in people who are treated with multimodal physical therapies in a primary care setting? **Design:** Observational study with 3-month follow-up, run in conjunction with a randomised trial. **Participants:** 181 adults who consulted a physiotherapist or chiropractor for a new episode of non-specific neck pain. **Outcome measures:** Time to recover from the episode of neck pain, time to recover normal activity, and pain and neck-related disability at three months. Clinical and demographic characteristics were investigated as potential predictors of recovery. **Results:** Within 3 months, 53% of participants reported complete recovery from the episode of neck pain. On a scale from 0 (none) to 10 (worst), pain improved from 6.1 (SD 2.0) at baseline to 2.5 (SD 2.1) at 2 weeks and to 1.5 (SD 1.8) at 3 months. On a scale from 0 (none) to 50 (worst), disability improved from 15.5 (SD 7.4) at baseline to 5.4 (SD 6.4) at 3 months. Faster recovery was independently associated with better self-rated general health, shorter duration of symptoms, being a smoker, and absence of concomitant upper back pain or headache. Higher disability at 3 months was independently associated with higher disability at baseline, concomitant upper or lower back pain, older age, and previous sick leave for neck pain. **Conclusion:** People who seek physical treatments for a new episode of neck pain in this primary care setting typically have high pain scores that improve rapidly after commencing treatment. Although almost half of those who seek treatment do not recover completely within three months, residual pain and disability in this group is relatively low. Physiotherapists should reassure people with a new episode of neck pain that rapid improvement in symptoms is common, modifying this advice where applicable based on risk factors. **Trial registration:** ANZCTRN12606000417583. [Leaver AM, Maher CG, McAuley JH, Jull G, Latimer J, Refshauge KM (2013) People seeking treatment for a new episode of neck pain typically have rapid improvement in symptoms: an observational study. *Journal of Physiotherapy* 59: 31–37]

Key words: Prognosis, Neck Pain, Rehabilitation, Physical Therapy Modalities, Risk Factors

Introduction

Neck pain affects up to two-thirds of the population at some stage in their lifetime (Cote et al 1998) and is a common reason for seeking health care. A recent systematic review reported that although a new episode of neck pain appears to improve substantially during the acute phase, the prognosis for complete recovery is quite poor (Hush et al 2011). Other systematic reviews have estimated that 50–85% of people with neck pain, when followed up for 1 to 5 years after the initial complaint, did not experience complete recovery (Carroll et al 2008). Few high quality studies of the clinical course of neck pain have been published, and understanding of factors associated with prognosis is limited (Borghouts et al 1998, Carroll et al 2008).

Knowledge about the course of a new episode of neck pain is important to clinicians and their patients. Current practice guidelines emphasise the role of informing and reassuring patients with benign spinal pain about the anticipated course of the condition (Childs et al 2008, NHMRC 2004, Scholten-Peeters et al 2002). This information is important in shaping patients' expectations about recovery and can help in addressing associated fear or anxiety. Additionally, understanding the clinical course of a condition can help assessment of individual patient outcomes by providing a meaningful point of reference with which to compare an individual patient's progress.

It is also important to be able to distinguish those with neck pain who will improve rapidly from those who will develop persisting pain and disability. Neck pain is commonly managed in a primary care setting by physiotherapists and chiropractors. Despite this there is limited knowledge about the prognosis of neck pain in these settings. There is evidence that multimodal treatments consisting of manual therapy and exercise, as provided by these practitioners, are effective in reducing neck pain in the short term (Hurwitz et al 2008, Leaver et al 2010b). Identification of factors associated with recovery in patients receiving multimodal treatment might better inform treatment selection, as well as assist with identification of those patients who might be unsuitable for these treatments.

What is already known on this topic: Neck pain is a common condition and a substantial proportion of those who develop a new episode of neck pain experience persisting or recurrent symptoms.

What this study adds: This study provides a more detailed report on the early clinical course of a new episode of neck pain in people who seek physiotherapy or chiropractic care. The clinical course of neck pain in this group is more positive than previous studies would suggest. On average, improvement in symptoms and functional limitation is rapid and persisting levels of pain and disability at three months are relatively low.

The research questions were:

1. What is the clinical course of a new episode of non-specific neck pain in patients who are treated with multimodal physical therapies in a primary care setting?
2. Are there demographic or clinical factors that are associated with faster rates of recovery from a new episode of neck pain?

Method

Design

An observational study was conducted within the framework of a randomised trial (Leaver et al 2010a). The trial compared the effectiveness of two manual therapy interventions for a new episode of non-specific neck pain and demonstrated no difference in recovery rates or disability outcomes between these interventions. The trial participants were therefore considered to be a representative cohort for this observational study, which investigated the clinical course of patients treated with manual therapy for a new episode of non-specific neck pain.

Participants, therapists, centres

Participants were recruited from physiotherapy and chiropractic clinics in Sydney, Australia. Consecutive patients aged between 18 and 70 years with a new episode of non-specific neck pain were included. A new episode of neck pain was defined as pain in the region between the superior nuchal line and the first thoracic spinous process (Merskey and Bogduk 1994) that was of less than 3 months duration and was preceded by at least one month without neck pain. Patients were excluded if they had neck pain related to a motor vehicle accident or other significant trauma, a primary complaint of arm pain, signs of specific or serious pathology (eg, malignancy, infection, inflammatory disorder or fracture, radiculopathy or myelopathy), a history of neck surgery, neck pain severity less than 2 on a numerical rating scale from 0 (none) to 10 (worst) pain, or were not literate in English. Participants were also excluded if the treating practitioner deemed them unsuitable for manipulative manual therapy, because this was an exclusion criterion for the concurrent randomised trial.

Participants received multimodal physical therapies at four treatment sessions over two weeks. All participants were treated with manual therapy in the form of either high velocity thrust manipulation or mobilisation, according to group allocation in the concurrent randomised trial. The selection of individual manipulation or mobilisation techniques was otherwise at the discretion of the treating practitioner. In addition participants received multimodal physical interventions such as exercise, advice about activity, and electrophysical agents, which were applied pragmatically according to the judgement of the treating practitioner. The practitioners in this study were experienced physiotherapists and chiropractors.

Procedures

Participants completed baseline questionnaires at their initial appointment. Outcome data were collected over a 3-month period using standardised diaries. The diaries included a daily measure of pain on a numerical rating scale from 0 (none) to 10 (worst). Activity interference was also recorded in the diaries daily using Item 5 from the 12-Item Short-Form Health Survey (Ware et al 1996), a 5-point scale

anchored by 'not at all' through to 'extreme interference'. To ensure completeness of follow-up, data from the diaries were collected by telephone interview at weekly intervals for the first four weeks, then monthly or until recovery for the subsequent eight weeks (84 days in total). At three months, a telephone exit interview was conducted at which the Neck Disability Index (Vernon and Mior 1991) was administered and pain scores were collected.

Outcome measures

Primary outcome: The primary outcome was the time taken from commencement of treatment to recovery from the episode of neck pain. The day of recovery from the episode of neck pain was defined as the first day of seven consecutive days on which the patient rated the intensity of their average daily neck pain as < 1 on the numerical rating scale from 0 to 10.

Secondary outcomes: Secondary outcomes included time to recovery of normal activity as well as pain (numerical rating scale 0–10) and disability (Neck Disability Index scale 0–50) scores at three months. Time to recovery of normal activity was defined as the first day of seven consecutive days in which the participant rated the degree of interference 'not at all'.

Prognostic factors

We examined 22 putative prognostic factors. Eight demographic variables were examined: age, gender, level of education, employment status, change of employment status due to neck pain, smoking habit, whether a compensation claim for neck pain had been lodged, and self-rated general health. Level of education was determined using items from the Australian Census 2001 (Trewin 2000). Employment status was determined using categories described by Kenny et al (2000). Self-rated general health was measured using Item 1 of the 12-Item Short-Form Health Survey (SF-12). The 14 clinical variables examined were: pain intensity on the 0–10 numerical rating scale, duration of neck pain, disability measured by the Neck Disability Index from 0 (none) to 50 (worst), the physical (PCS) and mental health (MCS) component summary scales of the SF-12, presence of concomitant symptoms (upper limb pain, headache, upper back pain, lower back pain, dizziness and nausea), past history of neck pain, previous sick leave for neck pain, and use of analgesics.

Data analysis

The clinical course of the episode of neck pain was described using Kaplan-Meier survival curves and using descriptive statistics. Prognostic factors were evaluated using separate prognostic models for recovery from the episode of neck pain and disability at 3 months. The first stage involved examination of the univariate relationship between the outcome and each prognostic variable, using Cox regression (for time to recovery), and linear regression (for disability at 3 months). Variables with significant associations ($p < 0.1$) were selected for inclusion in the multivariate analysis. This level of significance was chosen to decrease the likelihood of overlooking potential prognostic factors. Where there was a moderate or strong correlation (Pearson's $r > 0.4$) between individual predictor variables, the variable with the best psychometric properties or ease of clinical application was selected. The selected predictor variables were assessed using multivariate stepwise regression to identify the independent prognostic variables.

Download English Version:

<https://daneshyari.com/en/article/5864186>

Download Persian Version:

<https://daneshyari.com/article/5864186>

[Daneshyari.com](https://daneshyari.com)