

Acute low back usually resolves quickly but persistent low back pain often persists

Synopsis

Summary of: Costa LCM, et al (2012) The prognosis of acute and persistent low-back pain: a meta-analysis. *CMAJ* 184. DOI:10.1503/maj.111271 [Prepared by Margreth Grotle and Kåre Birger Hagen, CAP Editors.]

Objective: To review the evidence of clinical course of pain and disability in patients with acute and persistent low-back pain, and to investigate whether pain and disability had similar courses. **Data sources:** MEDLINE, CINAHL and Embase databases were searched from 1950 to November, 2011. This search was supplemented by searching of reference lists from eligible studies. **Study selection:** Inception cohort studies involving patients with acute (< 6 weeks) and persistent (\geq 6 weeks) low-back pain in which pain or disability outcomes were reported. **Data extraction:** Two reviewers extracted data and discrepancies were resolved by consulting a third reviewer. Methodological quality was assessed using 5 criteria suggested by Altman (2001). A meta-analysis of pain and disability outcome data was conducted, in which pain and disability were modelled as a function of time. **Data synthesis:** Of 28 613 studies initially identified by the search, 43 studies (33 cohorts) with a total of 11 166 patients met the selection criteria. Data quality was insufficient in many of the studies; only 52%

of the studies explicitly reported methods for assembling a representative sample, 73% had a follow-up of at least 80%, and 88% had a follow-up for at least one prognosis outcome at three months or longer. Based on the quantitative pooling of 24 cohorts and 4994 patients the variance-weighted mean pain score (0–100) was 52 (95% CI 48 to 57) at baseline, 23 (95% CI 21 to 25) at 6 weeks, 12 (95% CI 9 to 15) at 26 weeks, and 6 (95% CI 3 to 10) at 52 weeks after the onset of pain for cohorts with acute pain. Among cohorts with persistent pain, the variance-weighted mean pain score (out of 100) was 51 (95% CI 44 to 59) at baseline, 33 (95% CI 29 to 38) at 6 weeks, 26 (95% CI 20 to 33) at 26 weeks, and 23 (95% CI 16 to 30) at 52 weeks after the onset of pain. The course of disability outcomes was similar to the time course of pain outcomes in the acute pain cohorts, but for persistent pain cohorts disability only improved slowly, despite substantial initial improvement in pain. There were large within-study and between-study variation in outcomes. **Conclusion:** Most people who seek care for acute or persistent low-back pain improved markedly within the first six weeks, but afterwards improvement slowed. Low to moderate levels of pain and disability were still present at one year, especially in people with persistent pain.

Commentary

This review mainly concerns patients with non specific low-back pain, and not the patients with a confirmed disc herniation or nerve root involvement. It confirms two well-documented facts in the story of low-back pain: first, it clarifies that acute low-back pain patients in the great majority of cases recover within six weeks and have minor problems after one year. This is reassuring with regard to prognosis. Second, patients with persistent low-back pain also show substantial improvement in pain, but in contrast to the group with acute low-back pain, there are only small improvements in disability at one year of follow-up. These findings are in accordance with long-established views. Already in the 1980s it was emphasized that pain and disability are both conceptually and clinically different, and that failure to distinguish between pain and disability might explain some of the poor effectiveness of treatment interventions provided to patients with long-term back pain (Waddell 1987). The current meta-analysis is an important reminder of this distinction as suggested in a recent commentary (Buchbinder and Underwood 2012). A better distinction between pain and disability could improve our understanding of what contributes to persistent disability from an episode of low-back pain and identify better treatment targets.

Meta-analyses can be regarded with some skepticism, especially when information from very different studies

is combined and the assessment of pain and disability was not standardised in the different studies. However, this review includes a large number of prospective cohorts and the tendency is clear. The large number of participants contributes to credible results. For society, the results of this study by Costa et al should be of great importance. They provide support for the policy that patients with acute low-back pain can be expected to recover quickly, consistent with European guidelines (van Tulder et al 2006). From a societal perspective there is a large need for improved preventive and treatment strategies for the group of patients with persistent low-back disability.

Ingrid Heuch

Department of Neurology, Oslo University Hospital

Ida Stange Foss

*Communication and Research Unit for Musculoskeletal Disorders (FORMI), Oslo University Hospital
Oslo, Norway*

References

- Altman DG (2001) *BMJ* 323: 224–228.
- Buchbinder R, Underwood M (2012) *CMAJ* 184: 1229–1230.
- van Tulder et al (2006) *Eur Spine J* 15: S169–191.
- Waddell GA (1987) *Spine* 12: 632–643.