

Clinical Study

The prognostic value of catastrophizing for predicting the clinical evolution of low back pain patients: a study in routine clinical practice within the Spanish National Health Service

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Received 6 October 2010; revised 18 March 2012; accepted 11 June 2012

Abstract

BACKGROUND CONTEXT: Experimental studies suggest that catastrophizing may worsen the prognosis of low back pain (LBP) and LBP-related disability and increase the risk of chronicity.

PURPOSE: To assess the prognostic value of baseline catastrophizing for predicting the clinical evolution of LBP patients in routine clinical practice and the association between the evolution of pain and catastrophizing.

STUDY DESIGN/SETTING: Prospective study in routine clinical practice of the Spanish National Health Service.

FDA device/drug status: Not applicable.

Author disclosures: **FMK:** Nothing to disclose. **JS:** Nothing to disclose. **AR:** Nothing to disclose. **JCR:** Nothing to disclose. **AP-A:** Nothing to disclose.

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PATIENT SAMPLE: One thousand four hundred twenty-two acute and chronic adult LBP patients treated in primary and hospital care.

OUTCOME MEASURES: Pain, disability, and catastrophizing measured through validated instruments.

METHODS: Patients were managed according to routine clinical practice. Outcome measures were assessed at baseline and 3 months later. Logistic regression models were developed to estimate the association between baseline catastrophizing score and the improvement of LBP and disability, adjusting for baseline LBP and leg pain (LP) severity, disability, duration of the pain episode, workers' compensation coverage, radiological findings, failed back surgery, and diagnostic procedures and treatments undertaken throughout the study. Another model was developed to estimate the association between the evolution of LBP and the change in catastrophizing, adjusting for the same possible confounders plus the evolution of LP and disability. Models were repeated excluding the treatments undergone after the baseline assessment.

RESULTS: Regression models showed that the degree of baseline catastrophizing does not predict the evolution of LBP and disability. Conversely, as the degree of pain improvement increases, so does the odds ratio for improvement in catastrophizing, ranging from three (95% confidence interval [95% CI], 2.00–4.50; $p < .001$) for improvements in pain between 1.1 and 4 visual analog scale (VAS) points, to 7.3 (95% CI, 3.49–15.36; $p < .001$) for improvements in pain more than 6.1 VAS points. Similar results were obtained when treatments were excluded from the models.

CONCLUSIONS: In routine practice, assessing the baseline score for catastrophizing does not help clinicians to predict the evolution of LBP and disability at 3 months. © 2012 Elsevier Inc. All rights reserved.

Keywords:

Low back pain; Disability; Prediction; Catastrophizing; Routine clinical practice

Introduction

Nonspecific or common low back pain (LBP) is defined as the pain between the costal margins and the inferior gluteal folds, which may be associated with the pain referred down to the leg ("leg pain [LP]") and is usually accompanied by painful limitation of movement. Diagnosing common LBP implies that the pain is not related to conditions such as fractures, spondylitis, direct trauma, or neoplastic, infectious, vascular, metabolic, or endocrine-related processes [1].

Two of the main psychological factors that have been considered to negatively influence the prognosis of pain and disability in LBP patients are fear-avoidance beliefs (FABs) and catastrophizing [1–9]. Fear-avoidance beliefs refer to the fear-induced avoidance of movements or activities that are expected to be painful, whereas catastrophizing is defined as an exaggerated negative mental state related to an actual or anticipated painful experience [1–9]. In the Spanish cultural environment, FABs have shown to have an either negligible or nonexistent influence on LBP among elderly populations as well as acute, subacute, and chronic LBP patients treated in routine practice [10–13], whereas catastrophizing correlates with disability and explains approximately one-fourth of its variance [13,14], suggesting that it may have an influence on the prognosis of LBP patients.

From a theoretical point of view, pre-existing catastrophizing thoughts may hamper patients' clinical evolution. Conversely, it could also be hypothesized that catastrophizing would appear or be reinforced in patients who experience a disappointing clinical evolution, successive failed treatments, and continued pain and disability. This poses

a "chicken and egg" dilemma on the potential reciprocal influence between catastrophizing and lack of clinical improvement [3,7–9].

In fact, previous cross-sectional studies have shown that catastrophizing, pain, and disability correlate with each other [13–18], but results from prospective studies are inconsistent. Some randomized controlled trials and small studies in routine practice suggest that baseline catastrophizing is associated with the evolution of pain and disability, some suggest the contrary, and others conclude that catastrophizing predicts the outcome of acute LBP but not before 6 weeks after the onset of pain [2,4,7,19–31]. Results from the only large prospective study conducted in routine practice suggest that baseline catastrophizing does not predict the evolution of LBP-related disability [32].

If catastrophizing were to actually have a negative influence on prognosis, it would follow that, in routine practice, clinicians should identify patients in whom psychological treatment to address catastrophizing should be considered. To this end, a cutoff value for baseline catastrophizing, above which reducing it would be required to treat LBP successfully, should be identified.

Therefore, the objectives of this study were to determine whether assessing baseline catastrophizing would help clinicians predict the clinical evolution of LBP patients in routine clinical practice, while establishing the cutoff point to identify subjects in whom catastrophizing may hinder recovery and should therefore be treated and to assess the association between improvement in pain and the evolution of catastrophizing.

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