



ELSEVIER

International
Journal of
Orthopaedic and
Trauma Nursing

www.elsevier.com/locate/ijotn

REVIEW ARTICLE

Acute to chronic pain transition in extremity trauma: A narrative review for future preventive interventions (part 2)

Mélanie Bérubé MScN, CNCC (Doctoral Candidate, Advanced Practice Nurse – Orthopedics, Trauma) ^{a,b,c,*}, Manon Choinière PhD (Psychologist, Professor) ^d, Yves G. Laflamme MD, FRCS(c) (Orthopedic Surgeon, Professor) ^{b,c,e}, Céline Gélinas RN, PhD (Professor) ^{a,c,f}

^a Ingram School of Nursing, McGill University, 3506 University Street, Montréal H3A 2A7, Canada

^b Departments of Nursing, Orthopedics and Trauma, Hôpital du Sacré-Coeur de Montréal, 5400 Boulevard Gouin Ouest, Montréal H4J 1C5, Canada

^c Research Centre, Hôpital du Sacré-Coeur de Montréal, 5400 Boulevard Gouin Ouest, Montréal H4J 1C5, Canada

^d Centre de recherche du Centre of the Centre hospitalier de l'Université de Montréal (CRCHUM), Saint-Antoine Building, 850 Saint-Denis Street, Montréal H2X 0A9, Canada

^e Surgery Department, Faculty of Medicine, Université de Montréal, C. P. 6128, Succursale, Centre-ville, Montréal H3C 3J7, Canada

^f Centre for Nursing Research and Lady Davis Institute, Jewish General Hospital, 3755 Chemin, Côte-Ste-Catherine, Montréal H3T 1E2, Canada

KEYWORDS

Extremity trauma;
Limb injury;
Acute pain;
Chronic pain;
Acute to chronic pain transition;
Risk factors;
Protective factors;
Prognostic factors

Abstract Background: The first part of this series of 2 articles revealed that chronic pain is an important issue post extremity trauma (ET) involving permanent biological transformations. Interventions aimed at preventing chronic pain in ET patients are therefore required.

Objective: To conduct a comprehensive analysis of literature on risk and protective factors for chronic pain post-ET to guide the development of relevant preventive interventions.

Methods: A narrative review of the literature was undertaken. Databases were searched to identify studies on chronic pain prognostic factors in ET patients.

Results: Demographic, injury-related and psychological factors were shown to either contribute to or limit acute to chronic pain transition. High-intensity acute pain has

* Corresponding author. Hôpital du Sacré-Coeur de Montréal, 5400 Boulevard Gouin Ouest, Montreal H4J 1C5, Canada. Fax: +514 338 3925.

E-mail address: melanie.berube2@mail.mcgill.ca (M. Bérubé).

consistently been identified as an important chronic pain risk factor. Other significant documented risk factors include: female gender, older age, less than college education, lower limb injury, symptoms of anxiety and depression and pain catastrophizing. Pain self-efficacy and pain acceptance have been shown to protect individuals against chronic pain.

Conclusions: This narrative review highlights factors placing ET patients at higher risk of chronic pain or protecting them against this problem. Determining how these factors could be addressed in preventive interventions is the next step before undertaking their development.

Crown Copyright © 2016 Published by Elsevier Ltd. All rights reserved.

Contents

Introduction	2
Methods	3
Results	3
Chronic pain risk factors in the ET context	3
Chronic pain protective factors	5
Conclusions	6
Conflict of interest statement	7
Funding source	7
References	7

Editor comments

As discussed in the first of this important pair of articles, the development of chronic pain following limb trauma has a significant impact on patients' lives once the acute phase of recovery is complete. In the first paper the authors discussed the trajectory of acute to chronic pain transition. This second paper will help practitioners to understand the need for effective care that takes account of the imperative to manage acute pain effectively in order to protect the patient from the chronic pain experience. Practitioners need, also, to ensure that they focus on the psychological, and particularly, cognitive and emotional aspects of pain.

JS-T

Introduction

The majority of trauma patients suffer a limb injury ([Canadian Institute for Health Information, 2013](#)). This health problem can induce high-intensity, acute pain relating to associated osseous and soft-tissue involvement. In this regard, approximately 50% of ET patients report moderate to severe pain at hospital discharge ([Archer et al., 2012](#); [Williamson et al., 2009](#)) which becomes chronic in up to 86% of cases ([Clay et al., 2012](#); [Rosenbloom et al., 2013](#)).

Pain has several negative consequences. Initial poorly managed acute pain has been linked with undesirable outcomes, such as delayed mobilization and recovery as well as prolonged hospital length of stay ([Kehlet et al., 2006](#); [Morrison et al., 2003](#)). Furthermore, chronic pain has been shown to cause psychological distress ([Castillo et al., 2013](#); [Gureje et al., 2008](#); [Tsang et al., 2008](#)) and moderate to severe

disabilities ([Archer et al., 2012](#); [Castillo et al., 2006](#); [Holmes et al., 2010](#); [Vranceanu et al., 2014](#)) as well as to considerably affect return to work ([Clay et al., 2010](#); [MacKenzie et al., 2006](#)) with social costs several years post-injury ([Ebel et al., 2004](#)). Therefore, the development of nursing interventions aimed at preventing chronic pain is urgently needed.

Acute to chronic pain transition has been related to complex interplays between biopsychosocial risk factors and protective factors ([Katz and Seltzer, 2009](#); [Voscopoulos and Lema, 2010](#)). In part 1 of this series of two articles, permanent biological transformations (i.e., peripheral and central sensitizations, genetic priming and emotional shift in the brain circuitry involved in nociception) contributing to the development of chronic pain were described. Poor psychological health has also been identified as being involved in acute to chronic pain transition post-ET. Many studies have focused on chronic pain risk

Download English Version:

<https://daneshyari.com/en/article/5568472>

Download Persian Version:

<https://daneshyari.com/article/5568472>

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