

**Trauma, affective and pain characteristics of patients with acute musculoskeletal trauma
*Towards intervening the transition to chronic pain***

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BACKGROUND: Acute pain following traumatic injury is one of the most frequent reasons why patients are seeking medical care. This pain is complex and multifactorial. A combination of cognitive, affective, and trauma factors may be involved in pain perception and the transition from acute to chronic pain. Only a few studies assessed these characteristics of patients with musculoskeletal trauma in the Emergency Department (ED) in the Netherlands.

OBJECTIVE: The aim of our study is to describe characteristics of patients with acute musculoskeletal trauma to the extremities.

METHODS: This study is part of an one year prospective follow-up study in about 2000 adult patients with injury (fracture, soft tissue) due to blunt trauma to the extremities of the musculoskeletal system who attend the ED of Medisch Spectrum Twente, the Netherlands. Characteristics of the patient, including psychosocial-, trauma and health related factors, perception of pain before and during ED visit, and pain management are collected from questionnaires and hospital registration.

RESULTS: From September 19, 2011 till January 31, 2012, 214 patients (49% women; mean age=37.6; SD =14.7) filled out a questionnaire. Pain was in 77% of the patients the main reason to attend the ED after musculoskeletal trauma. The major causes were sport injuries (38%), domestic and work-related accidents (34%) and traffic accidents (14%). Almost half of the patients attended the ED within 2 hours after onset of pain. Patients reported a high frequency of pain, both on admission (99%) and discharge (98%). Their mean pain score changed from 6.3 (SD =2.3) on admission to 5.6 (SD=2.4) at discharge. Moreover, 68% of the patients had moderate to severe pain at discharge. Of the patients, 62% used pain management before attending the ED; 44% cooled their injury, 29% used self-medication and 14% received medication. Several patients used a combination. Symptoms of anxiety (13%) and depression (7%) were present in patients before injury. The vital status and health perceptions of the patients before trauma were comparable with the general Dutch population.

DISCUSSION: The present study provides insight in characteristics, pain and pain management of patients with acute musculoskeletal trauma. Multiple factors within this acute pain phase may be responsible for transition from acute to chronic pain after trauma. Those prognostic factors will give us the ability to target high-risk patients already in the acute care setting and provide them with appropriate treatment to avoid the development and subsequently the consequences of chronic musculoskeletal pain.

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