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Acute Pain Characteristics in Patients with and without Chronic Pain Following Lower Extremity Injury

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Abstract

Background—Many patients with injuries to lower extremities report chronic pain. High pain intensity at time of admission for injury is a risk factor for chronic pain, but it is not clear whether specific acute pain patterns following injury influence the development of chronic pain.

Aims—To examine the relationship between the pain trajectory, the mean pain score, and the frequency of pain documentation during the immediate hospitalization following injury, with the report of chronic pain.

Design—This was a descriptive retrospective cohort study of adults admitted with lower extremity fractures to an academic urban trauma center.

Methods—Participants, 6–45 months post injury, rated their current pain, worst pain, and average pain over the last three months. Pain scores from hospitalization associated with the injury were obtained through a retrospective chart review. The pain trajectory, mean pain score, and frequency of pain documentation was compared between patients with and without chronic pain.

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Disclosures

The authors declare no conflicts of interest

Results—A total of 129 patients were enrolled in this study and 78% reported chronic pain at the site of injury. The mean pain score (5.1 vs. 4.2) and first pain score (5.6 vs. 3.4) were higher for patients with chronic pain compared to patients with no chronic pain.

Conclusions—Consistent with other studies, high pain intensity at time of injury was associated with chronic pain. The findings contribute valuable information about acute pain characteristics associated with chronic pain and provide insight into the importance of early and adequate acute pain treatment.

Keywords

acute pain; chronic pain; pain trajectory; mean pain score

Many patients with traumatic injuries (62%) report chronic pain, with patients with injuries to the lower extremities reporting a higher proportion of chronic pain compared to patients with injuries to other body sites (Jenewein et al., 2009; Williamson et al., 2009). While acute pain serves a protective function, chronic pain is thought to be without apparent biological value and persists beyond the normal tissue healing time, which usually lasts three months (International Association for the Study of Pain (IASP), 2003). The consequences of trauma-related chronic pain are significant with patients reporting a high incidence of physical disability, work absence, and frequent health care visits (Jenewein et al., 2009). In addition, persons with post-trauma chronic pain report high levels of pain intensity, anxiety, and depression (Stålnacke, 2011) and a considerable number (87%) state that pain interferes with their daily activities (Clay et al., 2010).

Studies examining associations between chronic pain and any traumatic injury have identified a number of risk factors including older age, untreated anxiety and/or depression, female gender, fewer years of education, and high pain intensity at time of admission (Clay, Watson, Newstead, & McClure, 2012; Holmes et al., 2010; Rivara et al., 2008). Of these risk factors, only pain intensity is amenable to immediate treatment at the time of traumatic injury. Pain intensity is a subjective experience defined as the magnitude or strength a person assigns a painful episode and is most frequently assessed using the numeric rating scale (NRS) (The Joint Commission, 2011). The Joint Commission (2011) advocates that pain be assessed and documented at regular intervals as an important step in determining whether the patient is in pain as well as gauging the effectiveness of treatment. The NRS is advantageous in that it allows the quantification of pain and can be used for statistical analysis. Pain intensity scores documented with the NRS during hospitalization immediately following traumatic injury (pain intensity at time of admission) have been used to classify patients into high and low acute pain categories by calculating the mean pain score from all of the pain scores collected (Holmes et al., 2010; Rivara et al., 2008). The time period the pain scores are collected varies from the first 24-hours of admission to the entire hospitalization, which can span several days. However, condensing all documented pain scores into one number results in the loss of valuable information regarding whether there is a change in the pain during hospitalization (Chapman, Donaldson, Davis, & Bradshaw, 2011).

An alternative statistical method is to plot pain scores over time using growth curve modeling (GCM), which allows for the examination of within-patient change that explores how the outcome changes over time for each patient; and between-patient differences that examines which predictors are associated with certain patterns of change (Curran, Obeidat, & Losardo, 2011; Singer & Willett, 2003). This statistical analysis allows for the calculation of trends or trajectories that can then be used to determine the rate of change over time and patients can be classified into three groups: 1) those whose pain improved over time, 2) those whose pain remained at a constant level and 3) those whose pain increased over time (Chapman et al., 2011). While the pain trajectory has been found to independently contribute to the prediction of chronic pain in patients following surgery (Althaus, Arránz Becker, & Neugebauer, 2014), the relationship of acute pain trajectories to chronic injury-site pain following a lower extremity traumatic injury remains unclear. The purpose of this study was to examine the relationship between the pain trajectory, the mean pain score, and the frequency of pain documentation during hospitalization with the report of chronic pain in patients with lower extremity injuries (Griffioen, 2015). We hypothesized that the acute pain trajectory would predict chronic pain status.

Methods

Design and sample

The university and hospital institutional review board approved HIPAA waiver of consent for screening for this retrospective cohort study of adult patients (21-years and older). Patient had at least one trauma induced lower extremity fracture and were admitted to a large academic urban trauma center between July 2011 and June 2014. The Abbreviated Injury Scale (AIS) score for each injury was limited to 1–5 for lower extremities and less than 3 for other body systems to minimize confounding from serious injuries to other body sites than lower extremities. Patients were enrolled three months to four years following injury; three months was chosen as the minimum time since injury to fit the definition of chronic pain as pain that lasts past three months (International Association for the Study of Pain [IASP], 2012). Patients were excluded if they had a first listed diagnosis of hip fracture related to a fall from the same level, fractures at body sites other than the lower extremities, head injury, mechanically ventilated, an injury that resulted in an amputation, length of stay shorter than 24 hours, and/or were admitted more than 24 hours post injury. The trauma registry was queried for patients meeting the inclusion and exclusion criteria. Subsequently, eligible English speaking patients with a telephone number on file were contacted during normal business hours (9 AM to 5 PM). During the telephone contact, the purpose of the study was explained, and verbal consent was obtained from patients willing to participate.

Screening and recruitment

A total of 1536 patients were identified as meeting inclusion and exclusion criteria during the specified period. Since IRB approval was for 1500 patients, the 36 oldest records were excluded. An additional 977 (65%) patients were identified as not meeting inclusion criteria during a closer review (Figure 1). The final number of eligible patients was 516, and all were contacted by telephone. Half of the patients (50%) did not answer the call after numerous attempts, and 16% responded it was a wrong number. Of the 176 patients who answered the

telephone, 73% consented to participate in the study and 27% stated that they were not interested. The final study sample was 129 patients.

Data collection and instruments

The primary outcome variable for this study was chronic pain. Pain variables documented during hospitalization used to examine associations with chronic pain were the pain trajectory, the mean pain score, and the frequency of pain documentation. Patient reported data were obtained by verbally administering a questionnaire during the telephone contact and from medical records that were accessed on secure computers. Clinical data (including pain during hospitalization) were obtained from the medical records of the index hospitalization. All data were entered into the Qualtrics database (Qualtrics Labs, 2250 N. University Pkwy, 48-C, Provo, UT 84604). The medical records were available as electronic documents and as handwritten progress notes that had been scanned and uploaded. Data were collected from the time of admission to discharge for each patient. Data to characterize patients came from the medical records and included demographic and clinical variables: age, gender, race, mechanism of injury, fracture site, surgical intervention, AIS scores, and length of stay. The AIS score ranks each injury anatomically based on the severity of the injury on a scale of one to six with one being minor and six unsurvivable (Trauma.org, 2007). The total score provides a summary of the injury severity sustained by the patient. Therefore, the mean AIS score for an individual patient can vary from one to infinite depending on the number and severity of injuries sustained.

Pain scores recorded on the 11-point Likert scale NRS and associated date stamp were obtained from the patient care daily record and used to calculate the pain trajectory, the mean pain score, and the frequency of pain documentation. The patient care daily record is used to document nursing care throughout the hospital stay after the patient is stabilized and transferred from the trauma resuscitation unit. Since the pain scores are documented with the vital signs and during routine patient care, before and after pain medication administration, pain scores while the patient is or is not in pain are recorded.

The Chronic Pain Grading Scale (CPGS) was administered during the telephone contact to assess for the presence of chronic pain at the site of injury. The CPGS is a valid and reliable instrument (Elliott, Smith, Smith, & Chambers, 2000; Korff, M., Ormel, J. & Dworkin, 1992) and has been used to assess for pain in patients with traumatic injuries (Castillo, MacKenzie, Wegener, & Bosse, 2006; Rivara et al., 2008). The subscale score characteristic pain intensity was used to categorize patients into those with and without chronic pain. This item is the sum of three questions, each scored on an 11-point Likert scale with responses ranging from 0 – 10 **for a maximum of 30 points** (Korff et al., 1992). The three questions have the patient rate their (1) current pain, (2) worst pain, and (3) average pain over the last three months (15). The patients were asked to report only on pain related to the site of injury. Patients with a score of 0 were categorized as having no chronic pain; patients with a score from 1 – 30 were categorized as having chronic pain. This was based on scoring criteria from the CPGS where a score of 0 is considered no pain (Korff et al., 1992) as well as previous studies using 0 as a cutoff for chronic pain (Castillo et al., 2006; Rivara et al., 2008).

Additional questions asked to further help characterize patients with chronic pain were: (1) if a healthcare provider had ever diagnosed them with a chronic pain condition and whether this diagnosis was before or after the injury occurred; (2) whether they were currently taking medication for the pain; (3) if the medication was over the counter or by prescription; and (4) if they took it routinely or only when in pain.

Data analysis

Data analysis was conducted using SPSS 22.0 (IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp.). For group comparisons Chi-square test for independence and Fisher's exact test were chosen for categorical variables and independent samples t-test for continuous variables. The t-test was favored for non-parametric testing as it is robust to violations of normality in large samples (Tabachnick & Fidell, 2012, p.80). In addition, histograms looked reasonably normal, mean and median were similar, and the skewness was < 1 .

Documentation of pain scores does not always follow the NRS guidelines of using integers, instead using text or scoring more than 10. Therefore, pain scores documented outside the NRS were recoded as follows: patient denies pain coded as zero, patient is asleep coded as missing, scores recorded as higher than ten coded as ten, and scores between two whole number pain scores coded as the higher whole number pain score.

For the pain trajectory analyses, the intercept was the first pain score documented in the patient care daily record and the estimated slope or rate of change was the pain score over the course of hospitalization. Ordinary least squares was chosen to fit a linear change model (straight line) to depict individual trajectories. The intercept and slope were modeled as random effects. Based on previous literature examining trajectories in patients with postoperative pain (Althaus et al., 2014; Chapman et al., 2011) and pain following discharge from the emergency room (Chapman, Fosnocht, & Donaldson, 2012), a 50% confidence interval was created around each pain trajectory. Three pain trajectory levels were created using the slope estimates and the confidence intervals. If the 50% confidence interval included zero, the patient was classified as having a flat pain trajectory and categorized into the group with no change in pain. The remaining patients with a negative pain trajectory were classified as having improved pain and patients with a positive pain trajectory had pain that worsened. For analysis, patients with flat and positive pain trajectories were grouped into those with not improved pain. The intraclass correlation coefficient (ICC) was calculated to estimate how much of the variation in pain scores was within-patients.

The mean pain score was calculated from all pain scores noted in the patient care daily record. Using the mean pain scores, patients were categorized into four categories of pain: (1) no pain (pain = 0); (2) mild pain ($0 < \text{pain} < 4$); (3) moderate pain ($4 \leq \text{pain} < 7$); and (4) severe pain (pain ≥ 7). The first pain score was the initial pain score and the last pain score was the final pain score documented. Time to first pain score was calculated by taking the time from the first pain score minus time of admission and time between pain scores was the difference in time between two adjacent pain scores. Average number of pain scores per day consisted of dividing the total number of pain scores with the length of stay.

Power analysis

The estimated sample size was based on the multiple logistic regression model of developing chronic pain and the mean acute pain scores at staying in the hospital. A previous study found that 63% of trauma patients reported injury-related pain 12 months after injury (Rivara et al., 2008). The total sample size required to detect an odds ratio of developing chronic pain with $\alpha = 0.05$ two-sided, and with sufficient power (> 0.8) was a total of 381 patients.

Results

Sample characteristics

Patients were enrolled anywhere from 6 to 45 months following injury with 60% of patients enrolled within two years of injury. At the time of enrollment, 101 (78%) patients reported pain at the site of injury and were categorized as chronic pain (Table 1). The youngest patient was 21 years old, and the oldest was 77 years old. A majority of the patients were white males admitted following fibula and/or tibia fractures. The shortest length of stay was 1.1 days, and the longest was 14.5 days with an average length of stay of 3.7 (SD = 1.2) days. No statistically significant differences were identified between those with and without chronic pain based on demographic and clinical variables.

Chronic pain characteristics are detailed in Table 2. The lowest individual characteristic mean chronic pain score **from the CPGS** was 1, and the highest was 30 (Figure 2). Current pain and average pain in the last three months was mild, while worst pain was moderate. More than half of the patients reported experiencing pain every day. Of the 33 patients that took medication for pain, 39% took it routinely. One-fourth (24%) of the patients had chronic pain diagnosed by a healthcare provider; for half of the patients this was a preexisting chronic pain condition and for the other half it was chronic pain that occurred after the injury.

Pain trajectory

A total of 2,330 pain scores were available for analysis from the patient care daily record. Of the 129 patients enrolled, 51 had pain scores documented outside the 0–10 NRS, totaling 94 pain scores. Twenty-four pain scores were documented as a score falling between two whole numbers, 34 as the patient is asleep, 12 as patient denies pain, 10 scores were higher than the cutoff of 10, and 13 were illegible.

Patients with and without chronic pain were similar with respect to their pain trajectories and whether their pain improved or did not improve during hospitalization (Table 3). The estimated intercept for the sample was 5.143, and the estimated slope was $-.012$ (50% CI = $-.022, -.003$), indicating that the average pain for the trauma population at the start of hospitalization was moderate and improved throughout the hospitalization. For 54% of the patients the pain worsened from admission to discharge. The intraclass correlation was 0.42 indicating that 42% of the variation was within-patients. Interestingly, the mean pain score did not predict resolution of pain. Patients with similar mean pain scores during hospitalization could have improved, not improved or no change in pain patients, indicating

that patients with comparable mean pain scores can have a very different pain course during hospitalization (Figure 3).

Mean pain score

Patients with chronic pain had a statistically higher mean pain score during hospitalization and higher first pain score compared to those without chronic pain (Table 3). The most frequently reported pain score was four (14%), followed by five (13%), six (12%) and eight (12%). Ten percent of the pain scores were recorded as zero (no pain). Patients with moderate to severe pain during hospitalization were more likely to report chronic pain (74%) compared to those with no or mild pain (50%), $\chi^2 (1, n = 129) = 4.949, p = 0.026$. There was no difference in chronic pain based on time since injury at time of enrollment in the study.

Frequency of pain documentation

The time to first pain score documented, average number of routine pain scores documented during a 24-hour period and having a pain score documented at least every four hours during hospitalization were not predictors of subsequent chronic pain (Table 3). The shortest period from admission to the first pain score recorded post-transfer from the trauma resuscitation unit to the inpatient unit was four hours, and the longest was 45 hours; the mean was 15.5 (SD = 13.2). The time interval between pain scores varied from 1 to 32 hours (M = 3.9, SD = 2.59); 68 % of patients had a pain score recorded at least every four hours. The highest number of pain scores documented for an individual patient was 73, and the lowest was 4.

Discussion

In this study, despite many months since injury, 78% of patients reported chronic pain, with 61% reporting pain every day; and a staggering 54% of patients with lower extremity injuries experienced worsening pain during hospitalization **from time of admission to discharge**. Patients with chronic pain had higher mean pain score, and higher first pain score during hospitalization compared to patients with no chronic pain. While it was hypothesized that uncontrolled acute pain may lead to chronic pain, there were no difference in patients with and without chronic pain based on the pain trajectory.

The high acute mean pain score associated with chronic pain in this study parallels what has been reported in other studies where high acute pain was found to be a risk factor for patients with chronic pain following an injury at four months (M = 7.5 vs. 5.5) (Trevino, Harl, Deroon-Cassini, Brasel, & Litwack, 2014) and twelve months (M = 5.3 vs. 3.8) (Holmes, et al., 2010). It is currently not clear in what way a high mean pain intensity score may contribute to chronic pain. However, high intensity acute pain does induce a burst of activity in peripheral and spinal cord neurons and uninterrupted, this neuronal activity may result in the onset of central sensitization (decreased neuronal response threshold) in the spinal dorsal horn that is associated with chronic pain (Apkarian, Balik, & Geha, 2009). The decreased thresholds for activation of spinal dorsal horn neurons results in pain hypersensitivity with symptoms of hyperalgesia (heightened pain response) and allodynia (pain response to non-painful stimuli), frequently present in many chronic pain conditions

(e.g., fibromyalgia, osteoarthritis, headache, temporomandibular disorders) (Woolf, 2011). These symptoms of pain hypersensitivity can be very debilitating for patients, but it is currently not known whether patients with chronic pain following lower extremity injuries experience present with these symptoms. Therefore a future study examining symptoms of pain hypersensitivity would be important to further phenotype chronic pain in this patient population.

Of interest in this study is that a single pain score collected at a specific time (first pain score documented in patient care daily record) was correlated with chronic pain status. Others (Jensen, Hu, Potts, & Gould, 2013) report that a single 24-hour pain recall rating was as valid for detecting treatment effects as a composite score made up of two to nine different ratings. This finding could be because clinical pain is not experienced as a constant, but varies over time, and when queried, patients tend to summarize their experience into a single number rating (van Wijk, Lobbezoo, & Hoogstraten, 2013). This supports the concept of using a mean pain score as a predictor, but the difficulty lies in the subjective nature of pain. An individual patient's pain score is influenced by how it compares with a previous painful experience and it takes into account the rank position and proximity to high or low extremes of a stimulus (Watkinson, Wood, Lloyd, & Brown, 2013). Therefore, between-patient comparisons based on mean pain score is challenging as it does not account for individual variability in how pain changes over time.

Another finding in this study was that the frequency of pain score documentation was not associated with neither acute nor chronic pain. This is in contrast to what has been identified as the most common reason for the under-treatment of pain, the failure of clinicians to assess pain and pain relief (The Joint Commission: The National Pharmaceutical Council, 2001). Pain scores in many institutions turn out to be collected with the vital signs, and consequently documented every four hours. But pain assessment of hospitalized patients is sporadic and lingers around 52% to 59% (Brown, Klein, Lewis, Johnston, & Cummings, 2003; Ware, Epps, Clark, & Chatterjee, 2012). In a study of trauma patients in an emergency room, 60% of patients who had pain scores documented received analgesics compared to 33% of patient who did not have pain scores documented (Silka, 2004). However, one study that examined patients with fractures did not find a difference in the administration of analgesia between those with and without pain scores documented (Brown et al., 2003). This highlights the difficulty of assessing the correlation between pain scores and the administration of analgesics, and further studies are needed to examine the association between the efficacy of analgesics documented using pain scores at time of injury and chronic pain.

The pain trajectory was not correlated with chronic pain in this study, and one potential reason is that the time of hospitalization was fairly short compared to the time for fractures to heal. A longitudinal study examining pain over weeks would more accurately describe how pain changes as the injury heals and it might be possible to establish whether there is a specific time point where the acute pain becomes chronic. In addition, there should be a gradual decline in pain during hospitalization as the injury is stabilized and starts to heal, but 59% of fracture patients report moderate to severe pain at the time of discharge from the emergency department (Archer, Castillo, Wegener, Abraham, & Obremskey, 2012). It is

currently not clear why treatment is not efficacious in controlling pain for some patients; it could be a combination of physiological, psychological, and genomic factors and further studies are needed.

Limitations

Limitations of this study **include the sample size**. This study might not have been powered enough to detect differences based on pain trajectories. However, there were some significant results discovered. The cutoff time for healing following injury for this study was three months, which might not be sufficient time for the injuries to heal (Merskey & Bogduk, 2002), therefore participants enrolled close to their date of injury might still have been experiencing acute pain and not chronic pain. In addition, the sample characteristics from this study are different from other studies as it was limited to patients with only lower extremity fractures; other studies have included patients with injuries to all body sites, a more heterogeneous group. Due to the retrospective study design it was not possible to collect data on untreated anxiety and depression and number of years of education. As for calculating the pain trajectory, the higher the number of data collection points, the more accurate the trajectory and one patient in this study only had four pain scores recorded in the patient care daily record. It is also possible that not all pain scores obtained during assessment were documented. Additionally, recruitment bias is always a possibility in retrospective cross-sectional studies; we attempted to mitigate this somewhat by contacting patients during different times of the day.

Nursing implications

This study and others have identified high pain intensity in the immediate hospitalization following injury a risk factor for chronic pain. Nurses caring for this patient population are in a position to ensure that patients receive early and adequate acute treatment for pain as assessment, treatment and re-assessment of pain is a vital function of nursing care. In addition, documenting how patients' pain changes over time in real time would have the potential to identify whether a specific treatment administered for pain is effective, and if not, an alternate treatment could be initiated.

Conclusion

Despite the limitations of this study, the findings contribute valuable information about acute pain characteristics associated with chronic pain reported by patients with lower extremity injuries. Mapping acute pain patterns address the importance of early and adequate acute pain treatment following trauma and thus improve patient lives by providing high-quality patient care.

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Figure 1.

Flow diagram of patient screening and recruitment. ^aOther included patients with fractures to other body sites in addition to lower extremity fractures.

Figure 2.
Frequency of current pain intensity score from the CPGS. N = 129.

Figure 3.

Pain trajectories with similar mean pain scores. Each line depicts a different participant's pain trajectory, and while each mean pain score is similar, the pain trajectory is different. Patients with similar mean pain scores can have pain that improved (negative trajectory), pain that did not change (flat trajectory) or pain that got worse (positive trajectory). The mean pain score did not predict resolution of pain. NRS = Numeric Rating Scale.

Table 1

Lower extremity trauma patient demographic and clinical characteristics

Characteristic	Total (n = 129)	No chronic pain (n = 28)	Chronic pain (n = 101)
Male, n (%)	94 (73)	17 (61)	77 (76)
White, n (%)	93 (72)	23 (82)	70 (69)
Injury mechanism, n (%)			
MVA	51 (40)	13 (47)	38 (38)
Fall	64 (50)	11 (39)	53 (52)
Other	14 (10)	4 (14)	10 (10)
Fracture site, n (%)			
Fibula/tibia	87 (68)	15 (54)	73 (72)
Femur	22 (18)	7 (27)	15 (15)
Pelvic	10 (8)	4 (15)	6 (6)
Other	8 (6)	1 (4)	7 (7)
Surgery, n (%)	116 (90)	23 (82)	93 (92)
Age, M (SD)	46.2 (13.6)	49.9 (14.0)	45.2 (13.4)
AIS score, M (SD)	3.8 (2.0)	3.5 (1.8)	3.9 (2.1)
LOS, M (SD)	3.7 (2.1)	3.3 (1.8)	3.8 (2.2)
Months since injury at time of enrollment, M, (SD)	22.6 (12.1)	22.1 (12.1)	22.8 (12.2)

MVA = motor vehicle accident; AIS = abbreviated injury scale score; LOS = length of stay

Table 2

Chronic pain characteristics from CPGS for patients with lower extremity injuries (n = 101)

Characteristic	Total
Characteristic pain intensity score, M (SD)	10.7 (8.6)
Current pain, M (SD)	2.4 (2.7)
Average pain in last three months, M (SD)	3.1 (2.7)
Worst pain in last three months, M (SD)	5.1 (3.6)
Days of pain in the last six months, n (%)	
Some days	39 (39)
Everyday	62 (61)
Diagnosed with chronic pain condition after injury, n (%)	15 (15)
Taking medication for pain, n (%)	33 (33)

Comparison of pain during hospitalization between patients with and without chronic pain

Table 3

Variable	Total (n = 129)	No pain (n = 28)	Chronic pain (n = 101)	t/ χ^2	p
Mean pain score, M (SD)	4.9 (1.9)	4.2 (1.8)	5.1 (1.9)	-2.154	0.033 ^a
First pain score, M (SD)	5.1 (2.9)	3.4 (2.8)	5.6 (2.8)	-3.78	<0.001 ^a
Last pain score, M (SD)	4.6 (2.5)	4.3 (2.3)	4.7 (2.6)	-0.832	0.407
Time to first pain score (hours), M (SD)	15.7 (13.1)	14.9 (6.7)	15.9 (14.5)	-0.645	0.520
Number of routine pain score, M (SD)	4.8 (1.5)	4.8 (0.96)	4.8 (1.58)	0.042	0.967
Pain trajectory, n (%)				2.01	0.156
Improved pain	59 (46)	9 (32)	50 (50)		
Not improved pain	70 (54)	19 (68)	51 (50)		
Pain score at least q4hrs, n (%)	88 (68)	20 (71)	68 (67)	0.034	0.855
Pain category, n (%)				4.949	0.026 ^a
None/Mild	40 (31)	14 (50)	26 (26)		
Moderate/Severe	89 (69)	14 (50)	75 (74)		

Note.

^aSignificant at p < 0.05.