



(172) Initial neuropathic pain symptoms predict musculoskeletal pain severity six weeks after MVC

N Verma, T Platts-Mills, K Hunold, R Swor, D Peak, D Lee, J Jones, N Rathlev, R Domeier, P Hendry, and S McLean; UNC-Chapel Hill, Chapel Hill, NC

Neuropathic pain symptoms have been shown to predict persistent postoperative pain, however to date the ability of neuropathic pain symptoms to predict persistent musculoskeletal pain has not been assessed. In this prospective observational study, we assessed the ability of neuropathic pain symptoms to predict musculoskeletal pain severity six weeks after motor vehicle collision (MVC). European Americans ≥ 18 years of age presenting to one of eight emergency departments (EDs) in four no-fault insurance states within 24 hours of MVC who did not have a fracture or other injury requiring hospital admission were enrolled. Baseline interviews were performed at the time of ED evaluation and included an assessment of overall pain severity (0-10 scale). Neuropathic pain symptoms (DN4 questionnaire) were assessed in individuals reporting pain (ED pain score ≥ 1). Six week telephone follow-up evaluation included an assessment of overall pain and neck pain intensity during the past week (each assessed using a 0-10 scale). In the ED, 109/115 (95%) patients reported acute pain (score ≥ 1); 76/109 (70%) of these patients reported experiencing one or more neuropathic pain symptoms. Number of neuropathic pain symptoms and ED pain severity were moderately correlated ($r=0.35$, $p=0.01$). 78/115 (68%) patients reported persistent MVC-related pain (score ≥ 1) six weeks after MVC; 61/78 (78%) of these individuals reported coincident neuropathic pain symptoms. In a model adjusting for patient age and sex, the number of neuropathic pain symptoms reported in the ED predicted overall pain intensity at 6 weeks ($\beta=0.49$, $p<0.01$). The individual ED neuropathic pain symptom that most strongly predicted 6 week pain severity was painful cold ($\beta=2.31$, $p<0.05$). These results suggest that neuropathic pain symptoms are common in the immediate aftermath of MVC and predict pain severity at six weeks. Supported NIAMS R01AR056328 and NIH T35 Grant 5T35DK007386-32.

(173) Attitudes and perceptions of pain physicians regarding patients terminated from practice

G Jain, K Dzara, A Kaye, and H Gould; Southern Illinois University School of Medicine, Springfield, IL

Between 10-60% of all patients exhibit "difficult behavior" demonstrating anger, mistrust and a tendency toward being argumentative and non-compliant. Although termination of the doctor-patient relationship by the patient is frequent, the reverse is rare. Enhanced knowledge of a patient's potential for behaviors that are not compatible with maintaining a symbiotic physician-patient relationship in a chronic pain management setting may help pain physicians anticipate potential problems. The authors conducted a survey of pain physicians to determine an estimate of the annual rate of patient terminations from pain clinics, clarify the behavioral characteristics of terminated patients, and assess reasons for termination. A 34 question survey was sent to the physician members of the American Society of Interventional Pain Physicians. Most of the 188 respondents were non-academic practitioners. Most respondents (76.1%) terminated less than 20 patients per year. These patients were more likely to be males, between 25-45 years of age, who were on disability, and had been in the practice for less than 6 months. Nearly all physicians found prescription monitoring program (PMP) helpful to identify patients who were non-compliant with the mission of the clinic and provide objective evidence to support termination. The terminated patients frequently had a history of substance use or personality disorder. These patients were often treated simultaneously with ≥ 3 opioid medications. Terminated patients tended to present as needy but would soon exhibit aggressive or intimidating behavior, or continue to engage in negative health behaviors. The most common reasons for termination were violation of pain contract, positive urine test for illicit substance, and use of multiple prescribers. It may be useful to establish strict boundaries and have low tolerance to deviant behavior for patients who have at-risk characteristics. Regular review and discussion of data provided by PMP may improve physician confidence and patient compliance with management plan.

(174) Analysis of preoperative measures that predict interference with sleep recovery after surgery

P Schmidt, J Hah, P Barelka, C Wang, B Wang, M Gillespie, R McCue, J Younger, J Trafton, K Humphreys, S Goodman, F Dirbas, R Whyte, J Donington, W Cannon, S Mackey, and I Carroll; Stanford University, Stanford, CA

Previously, we reported a prospective observational study of the determinants of delayed opioid cessation after 5 distinct surgical procedures.¹ We conducted an exploratory analysis on this same data set to discover determinants of time to sleep recovery after surgery. This was defined as a decrease of reported pain interference with sleep on the Brief Pain Inventory to pre-operative values (or lower) for 5 consecutive days after surgery. All significant predictors in univariate Cox regression were considered in multivariate analysis. Three significant predictors were identified. Visual-analog pain score at the time of opioid cessation predicted a prolonged time to sleep recovery (HR=0.458, $p=0.0213$). One question of the Screener and Opioid Assessment for Patients with Pain ("How often have you had a problem getting along with the doctors who prescribed your medicines?") also predicted a prolonged time to sleep recovery (HR=0.182, $p=0.0119$). Finally, pain interference with sleep prior to surgery predicted shortened time to sleep recovery (HR=6.981, $p=0.0003$). Surgery type and pre-operative anxiety, depression and post-traumatic stress disorder symptoms were not significant predictors. Higher pain scores at the time of opioid cessation after surgery would reasonably be expected to indicate continued pain interference with sleep. Also, elevated pre-operative pain interference with sleep should predict faster sleep recovery merely given the elevated baseline sleep disruption. It is plausible that frustration with prescribing physicians may be indicative of underlying personality or psychological traits that may predict prolonged time to sleep recovery, but the association is not easily explained. This exploratory analysis underscores the complexity of the relationship between pain, sleep and recovery from surgery. (1. Carroll I, Barelka P, Wang CK, Wang BM, Gillespie MJ, McCue R, et al, Anesth Analg, 2012.)

A10 Psychological Assessment

(175) Screening for anxiety in youth with functional abdominal pain based on parent and child reports

N Cunningham, M Cohen, M Farrell, A Mezo, and S Kashikar-Zuck; Cincinnati Children's Hospital Medical Center, Cincinnati, OH

Functional abdominal pain (FAP) is a common pain condition associated with poor outcomes in youth including pain-related disability, school absences, and peer issues. Anxiety is highly prevalent in youth with FAP. There is less research on rates and types of anxiety most common to this population. It is unknown if child anxiety rates/types differ based on parent or child report. The current study investigated the rates and types of anxiety in a sample of youth with FAP. We hypothesized parent and child reported child anxiety would predict pain and impairment in youth. Participants ($n=34$ dyads, data collection ongoing) were youth ages 8-18 diagnosed with FAP by a pediatric gastroenterologist and their primary caregiver. Participants completed measures of anxiety, pain levels, and functional disability during their clinic visit. In contrast to previous studies that have assessed broader anxiety symptoms in this population, we used the Screen for Child Anxiety and Related Disorders (SCARED), a measure of anxiety that corresponds to DSM-IV diagnoses. We found that 52.5% of youth and 29.4% of parents reported clinically significant levels of overall child anxiety. The most commonly occurring anxiety types based on child report included: school avoidance (55.9%), generalized anxiety (32.4%), and separation anxiety (20.6%). For parents, they were: school avoidance (35.3%), generalized anxiety (44.1%), and separation anxiety (35.3%). Comorbidity of two or more anxiety disorders was 64.7% for child reports and 29.4% for parent reports. Further, both parent and child anxiety were found to predict increased pain intensity (t parent = -3.08, $p<0.01$ and t child = -2.80, $p<0.01$), and functional disability (t parent = -3.91, $p<0.001$; and t child = -3.97, $p<0.001$). These findings suggest children reported higher rates of child anxiety than their parents. With greater knowledge about the specific anxiety issues in the children, more tailored treatments can be designed.