Retrospective review of opioid use in pediatric patients with chronic pain

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Background and Hypothesis: Demographics and treatment of adult patients with chronic pain have been well characterized. The same has not been done in pediatric patients who are at increased risk of the consequences of opioid use including risk of addiction, truancy, and unemployment. We hypothesize that opioid use in pediatric patients with chronic pain leads to worse functional outcomes due to pain and maladaptive behaviors.

Methods: From 2016-2019, 300 new patient consultations to the Riley comprehensive pain clinic were identified. A subpopulation interim analysis of 71 patients was retrospectively evaluated at 6-month intervals for medical, social, pain-related, and questionnaire data. Data was recorded in REDCap by a single researcher. Exported data was analyzed using Microsoft Excel.

Results: Seventy-one patients were evaluated and 80% were female. Median age at diagnosis was 14 years (range birth to 18) with average follow-up of 20.5 months. Etiologies varied but contributed to neuropathic (49%), nociceptive (35%), and mixed (11%) pain syndromes. Comorbid psychiatric disorders and sleeping difficulties were present in 69% and 58%, respectively. Sixty-seven percent of age-appropriate patients graduated high school and were in college or employed on final follow-up. Patients managed with opioids did not report a change in visual analog or catastrophizing scales.

Conclusion and Potential Impact: The primary demographic of pediatric chronic pain patients is adolescent females. Neuropathic pain syndromes are common, with a majority of patients exhibiting comorbid psychiatric disorders and dysfunctional sleep patterns. Use of opioid medications did not change reported pain scores, and one-third of these chronic pain patients did not attend college or were unemployed. Further analysis of our data set should help better understand the outcomes of pediatric patients with chronic pain.