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A retrospective review: Lidocaine Infusion (LI) use in a pediatric chronic pain clinic including demographics, safety, and efficacy

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Background

Multidisciplinary management of pain can benefit many patients, although some continue to experience refractory pain. Limited studies in pediatrics support use of LI in managing chronic pain. This abstract describes the demographics of patients, the side effects, and response to LI in a subset of our clinic patients.

Methods

With IRB approval, a retrospective review of patients receiving LI for refractory pain between 2016-2021 was conducted. Demographic, medical, pain scores, sleep, and school functioning information was collected through self-report and electronic medical records.

Results

5% of patients presenting to clinic received LI as part of treatment for a variety of pain conditions, often overlapping. 350 LI in 184 unique patients, <23 years were evaluated. 64.7% received a single LI, 35.6% received more than one. LI were typically performed 2 years after initial evaluation in clinic. Patients who received LI were more likely to be older and have higher Pain Catastrophizing Scores (PCS) at the initial visit than those who did not receive LI. Additionally, females were more likely to receive LI than males.

Results

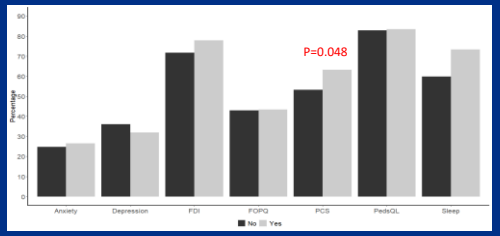

Figure 1. Comparison of functional measures for chronic pain patients that did and did not receive LI as part of treatment.

Side effects such as dizziness (5.4%), nausea (2.3%), were mild and transient. No patient experienced hemodynamic instability. 42% of patients had an initial decrease in pain scores at the completion of the LI, on average from 5.9 to 2.9 (p-value<0.001).

Side Effects	First LI	Repeat LI
Nausea	6 (2.7%)	2 (1.2%)
Dizziness	12 (6.5%)	7 (4.2%)
Metallic Taste	0 (0%)	2 (1.2%)
Brain Fog	0 (0%)	0 (0%)
Blurry Vison	2 (1.1%)	1 (0.6%)

Results

Of patients who received LI, the small subset of patients in whom we have follow-up survey data (n=63), showed no significant improvement in pain and function beyond a 2 week period following LI.

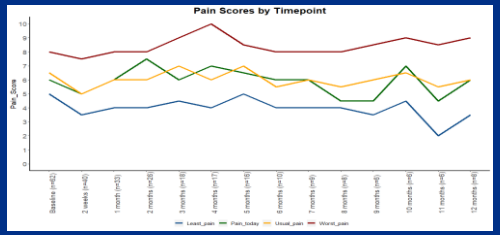

Figure 2. Pain scores at follow up for patients receiving a LI

Conclusion

LI for the treatment of chronic pain appears to be safe. Although approximately half of patients reported an immediate positive response, the small follow up sample that received LI did not appear to show a continued response and/or function. Limitations of our data preclude demonstrating long-term efficacy of LI in subgroups of the chronic pain population, therefore, prospective study of LI is critical.

References *provided upon request*