

THE TABLET: PALLIATIVE CARE PHARMACY TIPS



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TODAY'S TOPIC:

Another Tool in your Palliative Care Toolbox: Lidocaine Series Part 2

Question: What has happened in the literature since 2016 for use of IV lidocaine for refractory pain?

Background:

Several reviews dating prior to 2016 in palliative care literature and anesthesia literature evaluate the efficacy of lidocaine for different etiologies of refractory pain. Last week's article highlighted the evidence in palliative care literature.

Importance:

Further guidance surrounding IV lidocaine's use in palliative care is needed. Palliative care clinicians should be familiar with the recent literature to guide therapy decisions when considering utilizing lidocaine for refractory pain.

The Literature:

SC Route:

[J Palliat Med. 2020 Oct;23\(10\):1357-1364.](#)

Subcutaneous Lidocaine for Cancer-Related Pain

Methods: RCT 2x2 crossover trial; single dose IV lidocaine 10mg/kg over 5.5 hours (n=25)

Results:

- Primary Outcome: only 2 of 25 patients "successfully responded" to lidocaine; one with 30% reduction in opioid consumption, and one with a at least 2-point reduction on pain scale
- Secondary Outcome: Lidocaine had possible benefit in depressive symptoms
- Safety Outcome: No adverse events occurred that required infusion to be stopped

Conclusion:

- SC route of administration could increase accessibility of systemic lidocaine for patients at home, blood levels of lidocaine are not indicative of pain reduction, and further studies are needed with SC route of administration to determine efficacy.

[J Palliat Med. 2017 Jun;20\(6\):667-671.](#)

Subcutaneous Lidocaine Infusion for Pain in Patients with Cancer

Methods: retrospective review (n=20), median dose: lidocaine 0.67mg/kg/h, median duration 5.5 days

Results:

- Primary Outcome: 68% of patients experienced a decrease in pain score of more than 2, and lidocaine subjectively deemed effective in 45% of patients
- Safety Outcome: No documented adverse events attributed to lidocaine

Conclusion:

- SC route could be effective for refractory cancer-related pain for some patients and administration at low doses is well-tolerated.

Case Series:

[J Palliat Med. 2016 Dec; 19\(12\):1247-1248.](#)

Analgesic Effectiveness of Systemic Lidocaine Administration for Abdominal Cancer Pain Caused by Peritoneal Carcinomatosis: A Case Series of 10 Patients

Retrospective chart review of patients diagnosed with peritoneal carcinomatosis who received continuous IV lidocaine (n=10); adjuvant analgesics remained unchanged

Median dose of lidocaine: lidocaine 480mg/day = 20mg/h, duration of infusion unclear

Results:

- Primary outcome: median reductions in pain intensity on numerical PRS (0-10) were: 53.6% at 24 hours, 58.6% at 48 hours, and 75.7% at 72 hours
- Safety outcome: No serious adverse events associated with CIV at 72 hours

Conclusion: Pain scores were from electronic health record documentation, given the nature of the retrospective chart reviews, however this case series reinforces anecdotal evidence of the efficacy of IV lidocaine.

Case report:

[J Palliat Med. 2019 Mar;22\(3\):343-347.](#)

Intravenous Lidocaine Administered as Twice Daily Bolus and Continuous Infusion for Intractable Cancer Pain and Wound Care Pain

Lidocaine Regimen: Lidocaine 150mg IV Q12H bolus prior to dressing changes for duration of 63 days + lidocaine 1mg/min was initiated, administered for a period of 45 days

Results:

- Primary Outcome: Pain score improvement from 8-10 of 10 to 4-5 of 10 within 24 hours after continuous infusion began
- Safety Outcomes: Lidocaine drug levels were monitored, dose of continuous infusion was adjusted based on levels with the 45 day period

Conclusion:

- Other medication adjustments were made, so it is unclear if improvement in pain was entirely related to lidocaine, nonetheless he had a 50% reduction in pain within 24 hours of initiating continuous infusion

Home setting:

[J Palliat Med. 2020 Dec 22. doi: 10.1089/jpm.2020.0622](#)

Parenteral Lidocaine for Complex Cancer Pain in the Home or Inpatient Hospice Setting: A Review and Synthesis of the Evidence

Methods: Systematic Review of studies published in 2000 and onwards, 7 articles met inclusion criteria (n=73); doses and administration schedules varied, involving slow bolus versus continuous infusion; typologies of pain included: nociceptive, neuropathic, and mixed

Results:

- Observational studies concluded "good response" after parenteral lidocaine administered. No serious adverse effects were attributed to lidocaine.

Conclusion:

- Lidocaine can be used relatively safely in the home, more studies are needed to determine best regimen for medication administration.

Stay tuned for next week's article: What happens if IV lidocaine works... then what?

CLINICAL PEARL:

Lidocaine can be utilized in palliative care across multiple patient care settings safely; efficacy data is limited and dosing interval/regimen is not well defined. UPMC Clinical Practice Guideline for Lidocaine Use is a useful guide for dosing and monitoring IV lidocaine.