



Opioid-Induced Hyperalgesia (OIH)

Definition: Opioid exposure causes rewiring in the central and peripheral nervous systems, increasing a patient's sensitivity to painful stimuli and a worsening of their pain despite subsequent opioid increase. OIH is a form of opioid toxicity. OIH differs from Opioid Tolerance, which is a desensitization of the nervous system to a certain dose of opioid over time and requires dose increases to achieve symptom relief.

Management

- ***Critical*:** Complete a thorough pain history and assessment.
- Remember that more opioid will not help.
- Provide a calm explanation to patient and family in distress. OIH can be mistaken for disease progression.
- Ensure there is clear communication with care team about the management plan:
 1. Reduce the opioid dose by tapering off systematically (25-30% every 24 hours). Smaller reductions (i.e. 10-15%) are not useful.
 2. If possible, add in NMDA-receptor adjuvant medications (e.g. methadone, ketamine).
 3. Consider other adjuvant medications – steroids, NSAIDs, gabapentinoids, SNRI or TCA antidepressants or adjuvant therapies, like palliative radiation therapy.
 4. Consider non-tactile, non-pharmacologic management techniques as tolerated (i.e. distraction, meditation, breathing exercises, aromatherapy, Snozelin therapy, etc.).
- Intermittent sedation or palliative sedation therapy may be warranted.
- Continue to discuss goals of care with patient and family.

Adapted from Shobbrook, C. (2017). Opioid-Induced Hyperalgesia (OIH) [Presentation].

Risk Factors

- High-dose opioids
- Parenteral opioid administration

OIH can occur in any patient requiring opioids for symptom management, i.e. dyspnea, pain.

Presentation

- Worsening pain without evidence of disease progression
- Pain occurs: in areas unaffected by disease progression; diffuse pain; allodynia
- Pain worsens despite multi-fold opioid increases over a short period of time

Sources:

- Dumont, H. et al. (2007). Opioid Induced Hyperalgesia. *European Journal of Anaesthesiology* Vol 24(2), p 205-7.
- Kenter, E. et al. (2010). Differentiating neuropathic pain, opioid-induced hyperalgesia and opioid tolerance; considerations following a remarkable case. *Advances in Palliative Medicine*. 9(3), p 93-98. [Article](#)
- Lee, M. et al (2011). A comprehensive review of opioid-induced hyperalgesia. *Pain Physician*. Mar-Apr;14(2), p 145-61.
- Pasero, C. et al. (2012). Opioid Induced Hyperalgesia. *Journal of PeriAnesthesia Nursing*, 27(1), p 46-50. Available at www.jopan.org.