Addiction Nursing in an In-Patient Setting: Caring for the Patient with Opioid-Induced Tolerance and Hyperalgesia

June Thompson, RN and Jill Donaldson, RN, MSN, CNS, CMSRN and Dr. Daniel Headrick, MD

BACKGROUND

Opioid-Induced Hyperalgesia (OIH) is a clinical phenomenon, characterized and measured by increasing pain in patients that are receiving repeated doses of opioids. It has been recognized that opioids can activate a pronociceptive mechanism resulting in increased pain sensitivity. Evidence suggests that pain patients on chronic opioid therapy (and as little as 3 months) can become more sensitive to pain (hyperalgesia) over time. Everything hurts, hair, teeth, and even patients stroking their skin with cotton is painful (allodynia). Measuring patient pain is complex, relying on the patients self-report of pain scores makes it more difficult to distinguish OIH from other pain.

The majority of patients admitted to Mission Pacific Recovery Center with OIH simply say “I want my life back”, Nursing care is aimed at achieving pain recovery without the use of addicting medications. Some of the keys are to find a balance in life, explore alternative pain management strategies, begin to think about pain differently, and commit to a treatment program that will help provide freedom from habit-forming (addictive) substances.

CLINICAL FEATURES OF OPIATE WITHDRAWAL AND OIH

Signs and Symptoms Related to Opiate Withdrawal

**SYMPTOMS**
- Anxiety
- Insomnia
- Abdominal pain/cramps
- Rhinorrhea / Lacrimation
- Yawning
- Nausea/vomiting/diarrhea

**SIGNS**
- Dilated pupils
- Diaphoresis
- Pulse
- Breathing

Additional Symptoms Associated with OIH
- Increased sensitivity to pain
- Pain worsens despite increasing doses of opioids
- Pain becomes more generalized, and extends beyond the area of pre-existing pain
- OIH pain has a neuropathic component, and is usually described as a “burning pain” with increased sensitivity to light touch.
- Determine if pain is elicited from ordinarily non-painful stimuli such as stroking the skin with cotton (allodynia)

IDENTIFYING OIH ON ADMISSION

**Nursing Admission Assessment**

1. Factors precipitating hospitalization
2. Current Medications, previous chemical dependency/psychiatric hospitalizations
3. Pain assessment and history
4. Substance abuse history (physical symptoms as well as consequences of substance use, lethality)
5. Physical assessment, total body check, vital signs
6. Suicide assessment
7. Determination of withdrawal severity (COWs scale)

Glistening skin, photosensitivity, sweating, yawning, bruxism, nausea, vomiting, diarrhea, anorexia, irritability, headache, myalgia, dizziness, constipation, insomnia, and anxiety. The diagnosis of OIH may be made based on the history, physical examination, and the exclusion of other causes of pain. A review of the patient’s medical history is essential to identify any potential risk factors for OIH, such as previous exposure to opioids or a history of drug or alcohol misuse. The use of physical examination and diagnostic tests may also be necessary to confirm the diagnosis of OIH. The most common signs and symptoms of OIH include:

**Clinical Opiate Withdrawal Scale**

1. # GOAL IS EARLY IDENTIFICATION
2. In assessing for OIH, other sources of pain must be ruled out including opioid-analgesia failure, worsening pain pathology, opioid tolerance, physical withdrawal, pseudoaddiction and addiction
3. OIH is treated by reducing or eliminating the opioid and taking measures to reduce withdrawal severity. Subutex is a partial opioid agonist (in contrast to a pure opioid agonist like methadone), has a long duration of action, and may cause fewer withdrawal symptoms and complications.
4. Use of adjuvant “opioid sparing” drug therapies
   - Anticonvulsants
   - Antidepressants
5. Identification of Opioid withdrawal symptoms. The Clinical Opioid Withdrawal Scale is a useful tool for monitoring withdrawal symptoms. It should be administered 1-2 times daily. The score assists in choosing an appropriate patient management strategy.
6. Patients are induced with Subutex by administering the drug with gradual dose increments over 24 hours followed by stabilization doses. Based on severity, appropriate detoxification pathway is selected: Buprenorphine (Subutex) Pathway:
   - 2 mg SL Q3 hrs PRN for withdrawal symptoms
   - Start Buprenorphine 2 mg SL (0.5 mL) as follows:

   7. DAY DETOX
   - 2 mg SL at 0700, 1200, 1700, 2100 X 1 Day
   - 2 mg SL at 0700, 1400, 2100 X 2 Days
   - 2 mg SL at 0700, 1900, 2100 X 2 Days
   - 2 mg SL at 0900 X 2 Days

   8. DAY DETOX
   - 2 mg SL at 0700, 1400, 2100 X 1 Day
   - 2 mg SL at 0700, 1400, 2100 X 2 Days
   - 2 mg SL at 0700, 1900, 2100 X 2 Days

7. Additional Medications
   - Ketorolac (Toradol) 60mg IM at onset of pain x 1 dose only, then DC
   - Ketorolac (Toradol) 5mg IM Q 6hrs PRN for pain x 5 days
   - Ibuprofen 6hr Q6s for skeletal pain
   - Methocarbamol (Robaxin) Q 6hrs PRN for myalgia

8. Treat symptomatically with alpha blockade (clonidine 0.1-0.3 mg SL PO VIDID)

9. Use of holistic Therapies:
   - Heat, cold TENS unit, exercise, yoga, meditation, acupuncture

10. Patients should be monitored Q2 hours while awake in a detox for symptoms and complications in the first 24 hours.

11. Hydration: Patients should drink at least 2-3 L of water per day during withdrawal to replace fluids lost through perspiration and diarrhea

12. Patient Education
   - Reassure patient and family that pain will decrease with the use of other medications that allow a decrease in opioids
   - Duration and intensity of withdrawal symptoms are directly related with the dose, duration of use, time since last dose, and inversely with general health of the abuser. Duration of acute withdrawal can last for 7 days for heroin, 7 to 14 days for opiate analgesics, and up to 28 days or more for methadone.

13. Literature:

Table adapted in part from Dole and Ykle (1965)