

The Chronic Pain Patient, A Perspective For
Inpatient Pain Management

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Objectives

- ▶ 1. Be able to define the different types of pain and the role they play in persistent pain management.
- ▶ 2. Be able to calculate morphine equivalency and appropriate titration of opiates in the inpatient setting for the persistent pain patient
- ▶ 3. Be able to list the potential post operative complications of the persistent pain patient.

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A Little History...



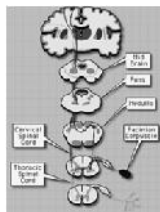
- ▶ The Greeks and Romans were the first to advance a theory of sensation, the idea that the brain and nervous system have a role in producing the perception of pain.
- ▶ But it was not until the Middle Ages and well into the Renaissance, the 1400s and 1500s, that evidence began to accumulate in support of these theories.

Leonardo Da Vinci and his contemporaries came to believe that the brain was the central organ responsible for sensation. Da Vinci also developed the idea that the spinal cord transmits sensations to the brain.

History Continued...

- ▶ In 1664, the French philosopher René Descartes described what to this day is still called a "pain pathway." Descartes illustrated how particles of fire, in contact with the foot, travel to the brain, and he compared pain sensation to the ringing of a bell.

Neuropathic Pain



Types of Pain:


- ▶ **Nociceptive**
 - Produced by the functioning of:
 - Chemoreceptors
 - Thermoreceptors
 - Mechanoreceptors
 - Serves to warn the body if an injury or potential for injury
 - Generally proportionate to receptor stimulus

- ▶ **Neuropathic**
 - Caused by damaged or malfunctioning nervous system
 - May involve sustained inflammatory process
 - Nociceptive sensory input not required
 - Generally NOT in proportion to injury₂



The Definition of Chronic Pain

- ▶ Now preferred term: Persistent Pain
- ▶ IASP (International Association for the Study of Pain)
 - “An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.”₅



Chronic Pain as Disease

- ▶ Immobility and consequential muscle and joint wasting
- ▶ Depression of the immune system leading to increased susceptibility to disease
- ▶ Disturbed sleep
- ▶ Dependence on medications
- ▶ Overdependence on family and caregivers
- ▶ Poor job performance, possible disability
- ▶ Isolation from society and or family/loved ones
- ▶ Anxiety and fear
- ▶ Bitterness, frustration leading to depression and potentially suicide₃



Inpatient Pain Management for the Chronic Pain Patient—Things to keep in mind

- ▶ #1, Each patient is an individual with specific diagnoses
- ▶ Things to consider...
 - Type of narcotics on admission
 - Length of time on narcotics
 - Dose of narcotics
 - Concomitant benzodiazepines
- ▶ Dependence/Tolerance ~~≠~~ Addiction

How to Effectively Manage...

- ▶ Titration that needs to occur from the outpatient setting to the inpatient setting.
 - Non pain admission (Pneumonia, COPD)
 - Do not need to adjust narcotic medications
 - Surgical/Painful Admission
 - 50 to 100% titration
- Many Hospitals (Hopkins, UW, OHSU) have a chronic pain service for consult within the hospital for this patient population



What Does 50 to 100% Look Like?

- ▶ **BASLINE**
 - Long acting
 - MSO4 ER 30mg 1 tab po q 12prn pain=60mg total
 - Short acting
 - Norco 5/325mg 1 tab po q 6 prn pain=20mg total (Morphine equivalent)
- ▶ **Titration says...**
 - MSO4ER 45mg for 50%; 1 tab po q 12prn pain=90mg total
 - MSO4ER 60mg for 100%; 1 tab po q 12=120mg total
 - Norco 5/325mg @ 50%=total 30mg so change sig to 1 tab po q4hrs prn pain or change to stronger dose
 - Norco 5/325mg @ 100%=40mg; better to have less APAP so increase dose to 10/325mg and give 1 tab po q6hrs prn pain

How to convert to IV:



Baseline:

Everything is converted to MSO4 for total dose over 24hr period approx 80mg/24hr = MSO4 IV 20mg/24hrs or approx **1mg/hr**

50%

MSO4ER 90mg+Norco 30mg=120mg PO/24hr=MSO4 IV 30mg/24hrs or approx **1.25mg/hr**

100%

MSO4ER 120mg+40mg=160mg PO/24hr=MSO4 IV 40mg/24hr or approx **1.6mg/hr**

Morphine Equivalent Dosing


- ▶ State of Washington, <http://agencymeddirectors.wa.gov/mobile.html>
- ▶ State of Oregon, Oregon State Board of pharmacy: <http://www.dhs.state.or.us/policy/healthplan/rules/notices/Reviewers%20re%20OPA%20crit%20changes%20to%20post.pdf>
 - Recommend using AMDG guidelines for opioid conversion

Physiological Complications of the Post-operative Patient

- Stress response to surgery Tissue trauma:
 - results in release of mediators of inflammation and stress hormones
 - Activation of this 'stress response' leads to:
 - Retention of water and sodium
 - Increase in metabolic rate
- Respiratory complications Shallow breathing
 - Cough suppression
 - Lobular collapse
 - Retention of pulmonary secretions
 - Infections
- Cardiovascular complications
 - Hypertension
 - Tachycardia
 - Increased myocardial work, which may lead to:
 - Myocardial ischemia
 - Angina
 - Infarction




Potential Pitfalls Con't...



- ▶ **Thromboembolic complications**
Reduced mobility due to inadequate pain management can lead to thromboembolic episodes
- ▶ **Gastrointestinal complications**
Gastric stasis
Paralytic ileus
- ▶ **Musculoskeletal complications**
Prolonged confinement to bed due to inadequate pain management leads to:
 - Reduced mobility
 - Muscle atrophy
- ▶ **Psychological complications**
Peri-operative pain may provoke fear and anxiety, which can lead to:
 - Anger
 - Resentment
 - Hostility to medical and nursing personnel

These symptoms are often accompanied by insomnia.

Goals of Pain Management



- ▶ Reduction of the intensity of pain
Adequate medicine, dose and frequency
- ▶ Improvement in physical functioning
Meeting goals for PT/OT
- ▶ Improved emotional functioning
Less anxiety, fear and depression
Less insomnia/sleep disruption
- ▶ Improved quality of life
Reduction or complete cessations of narcotics for successful post operative diagnoses
Adequate inpatient pain management and resuming prior or even decreased regimen on discharge

Nursing Elements

- ▶ Establishing mutual, realistic comfort and functionality goals
- ▶ Identify pain assessment tools appropriate to match specific patient needs
- ▶ Assess and reassess treatment responses throughout plan of care
- ▶ Document throughout the plan of care in an expedient and thorough fashion
- ▶ Gain insight about the impact of pain and its treatment on the patient's usual activities
- ▶ Ascertain the patient'/family's understanding of key treatment plan elements

Nursing Elements Con't

- ▶ Understand and educate the patient about the medication regimen (drug, dose, frequency, duration of therapy, route of administration, precautions)
- ▶ Observe for problems, adverse events, or toxicities that need to be reported promptly
- ▶ Assess limitations on ADL's
- ▶ Educate patient about importance of adherence of treatments as prescribed, record keeping and attending follow up appt's₄



And Finally...

QUESTIONS ????



Sources

- ▶ 1. http://www.neurosurgical.com/medical_history_and_ethics/history/history_of_pain.htm
- ▶ 2. Current Concepts in Pain Management
- ▶ 3. Chronic Pain Patient: An algorithmic approach to diagnosis and treatment; Oakley, J, M.D.. DNL circa 2004
- ▶ 4. Current Concepts in Pain Management: A Guide for Nurses. Ortho-McNeil-Janssen Pharmaceuticals: 2010
- ▶ 5. http://www.iasp-pain.org/AM/Template.cfm?Section=Pain_Definitions&Template=/CM/HTMLDisplay.cfm&ContentID=1728
- ▶ 6. <http://www.guideline.gov/content.aspx?id=16165&search=pain+management+in+hospital+and+chronic+pain>
- ▶ 7. <http://www.agencymeddirectors.wa.gov/opioiddosing.asp>
- ▶ 8. <http://www.dhs.state.or.us/policy/healthplan/rules/notices/Reviewers%20re%20PA%20crit%20changes%20to%20post.pdf>
