Understanding Cultural Differences in Pain Management

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Nothing to disclose

Content Attestation

I, Jon Streltzer, MD, hereby declare that the content for this activity, including any presentation of therapeutic options, is well balanced, unbiased, and to the extent possible, evidence-based.

Conflict of Interest Disclosure

I have no financial relationships with commercial entities producing, marketing, re-selling, or distributing health care goods or services consumed by, or used on, patients relevant to the content I am planning, developing, presenting, or evaluating.
**Culture**

Cultural has been conceptualized as including the behavior patterns, customs, values, and beliefs that make a group of people unique from other groups.

Culture is not the same as ethnicity


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**Culture and Pain**

- Zborowski - “Old Americans,” Jews, Italians
- USA & Europe - Rx vigorously now compared to 20-30 years ago

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**Cultural Group and the Undertreatment of Acute Pain**

![Graph showing morphine equivalent](Streltzer & Wade, Psychosomatic Medicine, 1981)

- Caucasian
- Hawaiian
- Filipino
- Japanese
- Chinese

Amount of pain meds in 5 days
Cultural Influence on Medical Disorders

- Medical disorders
  - Fibromyalgia
  - Chronic fatigue syndrome
  - Back pain
  - Whiplash
  - Irritable Bowel Syndrome

Medical Setting: Three Cultures

- Culture of the Patient
- Culture of the Doctor
- The Medical Culture
Culture of Medical Care

- Informing the dying patient with cancer
  - US internists - 95%
  - Chinese internists - 0%


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History of the medical use of opioids in the USA

- 1805– Morphine and 1832 – codeine isolated from crude opium
- Civil War
- Patent medicines
- In 1898 diacetylmorphine (Heroin), called “a safe preparation free from addiction-forming properties,” is made.
- The Boston Medical and Surgical Journal reported that heroin “possesses many advantages over morphine...it is not a hypnotic and there is no danger of acquiring the habit.”

History

- 1960’s - Sex, DRUGS, Rock ‘n Roll
- → undertreatment of acute pain
- Controlled Substance Act of 1972
- Opioid Receptors 1972
- International Association for Study of Pain
- 1970’s
- Pain Clinics—1970’s
- → liberal use of controlled drugs (overtreatment?)
Portenoy and Foley (1986)

24 of 38 pts reported less pain with chronic opiates (low doses)
No improvement in functioning

APS & AAPM 1997 Guides

Tolerance, or decreasing pain relief with the same dose over time, has not proven to be a prevalent limitation to long-term opioid use. The undertreatment of pain in today’s society is not justified. This joint consensus statement has been produced pursuant to the missions of both organizations, to help foster a practice environment in which opioids may be used appropriately to reduce needless suffering from pain.


In 2001, the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) introduced the concept that pain was the “fifth vital sign.”

“Rate your pain from 0-10”
The Problem of Under Treated Pain

The relief of suffering is universally acknowledged as a cardinal goal of the ethical and compassionate practice of medicine.

- 30 million Americans suffer with chronic pain.
- “Doctors are reluctant to prescribe opioids, thus 80% of those with chronic non-malignant pain go untreated as a result.”


Unintentional Overdose Deaths Involving Opioid Analgesics Parallel Opioid Sales
United States, 1997–2007

- Distribution by drug companies
  - 96 mg/person in 1997
  - 698 mg/person in 2007
  - Enough for every American to take 5 mg Vicodin every 4 hrs for 3 weeks

- Overdose deaths
  - 2,901 in 1999
  - 11,499 in 2007

*Source: Vital Statistics Systems, multiple cause of death data set
**Drug Enforcement Administration: Chart and discussed in the text
***Adapted from Mandell and Tough (1). Therapeutic opioids: A meta-analytic perspective on the consumption and complications of the escalating use, abuse, and overprescription of opioids. Pain Medicine 2008; 9:230-238
Purdue Pharma, Executives Plead Guilty To Misbranding OxyContin, Fined $634.5M (2007)

- The settlement is one of the largest financial penalties ever imposed on a drug company,
- the company made claims that OxyContin was less addictive than other painkillers and less subject to abuse, "despite warnings to the contrary from doctors, the media and members of its own sales force," the Times reports (Zimmerman, Los Angeles Times, 5/11). The company also claimed that OxyContin could be discontinued without feeling symptoms of withdrawal.
Unintentional Overdose Deaths Among Women

CDC – July 2013

Descending Control of Pain
Millan MJ, Prog Neuropsychiatry 2002;66:355-474

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Millan MJ, Prog Neuropsychiatry 2002;66:355-474
Mechanisms of Opioid-induced Pain and Antinociceptive Tolerance: Descending Facilitation and Spinal Dynorphin

• Vanderah, et al., Pain 92:5-9, 2001

  “Recent studies have shown that continuous opioid exposure produces exaggerated pain and, importantly, such pain occurs while the opioid is continuously present in the system”
CCK and Pain

[Graph showing mechanical and thermal hypersensitivity before and after CCK-8(s) administration]

Figure 1. Male Sprague Dawley rats received CCK-8(s) (30 ng/0.5 µl) bilaterally into the RVM and were tested for mechanical (A) or thermal (B) hypersensitivity using von Frey filaments or radiant heat, respectively. The bilateral RVM administration of CCK-8(s) resulted in significant mechanical (A; n = 8) and thermal (B; n = 7) hypersensitivity (*p < 0.05) that was significantly blocked by the preadministration of the CCK2 receptor antagonist L365,260 (2.5 ng/0.5 µl, -5 min) administered bilaterally into the RVM (**)p < 0.05; n = 8) but not by the CCK1 antagonist L364,718 (25 ng/0.5 µl, -5 min; n = 6). The preadministration of vehicle (0.5 µl, -5 min) had no effect on CCK-8(s)-induced mechanical and thermal hypersensitivity (n = 6). BL, Baseline.

Hyperalgesic responses in methadone maintenance patients

COLD PRESSOR -- TOLERANCE (SEC)

[Graph showing cold pressor tolerance improvement with methadone maintenance]

p<0.0001

Chronic Pain among Chemical Dependent Patients
Rosenblum et al., JAMA, May 14, 2003

% with Chronic Severe Pain

[Graph showing percentage of chronic severe pain in methadone and non-acute drug abusers]

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Chronic Pain among Chemical Dependent Patients
Rosenblum et al., JAMA, May 14, 2003

Effect of Duration of Methadone Therapy on Percent with Severe Chronic Pain

Denmark: Use of Strong Opioids

Critical Issues on Opioids in Non-cancer Pain: An Epidemiological Study
Eriksen et al., Pain, Nov 2006, 125:172-9

- N=10,066
  - Pain Group=1906
    - Regular opioid users =228
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Pain Group
(chronic/long lasting pain >6 months)

- Opioid users
  - 90% mod-very severe pain
  - Worse on all measures of function
  - Twice as likely to be on disability (adjusted for pain rating, benzo use)

- Non-opioid users
  - 46% mod-very severe pain


Denmark: Use of Strong Opioids
10000+ interviews; 1906 chronic pain; 228 opioid users

“it is remarkable that opioid treatment of long-term/chronic non-cancer pain does not seem to fulfill any of the key outcome opioid treatment goals: pain relief, improved quality of life and improved functional capacity”


Hyperalgesia in Opioid-Managed Chronic Pain and Opioid-Dependent Patients

Pain patients on chronic opioids are hyperalgesic like methadone maintenance patients

Justin L. Hay, Jason M. White, Felix Boehner, Andrew A. Somogyi, Tim J. Semple and Bruce Rounsefell

Who becomes drug dependent?


Americans, constituting only 4.6% of the world’s population, have been consuming 80% of the global opioid supply. Apart from lack of effectiveness (except for short-term, acute pain) there are multiple adverse consequences including hormonal and immune system effects, abuse and addiction, tolerance, and hyperalgesia. Patients on long-term opioid use have been shown to increase the overall cost of healthcare, disability, rates of surgery, …and unintentional deaths.


Table 2. Average pain scores for hydrocodone and oxycodone (controlled release) on admission, discharge and days during detoxification.

- Significant reduction in pain scale scores from a mean score of 5.5 on admission to 3.4 at discharge (P = 0.01), with 0 representing no pain, and 10 the most pain
- ANOVA analysis revealed only the amount of prescription opioid medications per day predicted a decrease in pain scores from admission to discharge, not age, sex, type of opioid medications, duration of opioid medication use

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**BUPRENORPHINE**
(± NALOXONE)

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**Recommended Websites**

www.responsibleopioidprescribing.org
(Site of Physicians for Responsible Opioid Prescribing)

http://www.youtube.com/watch?v=hwtSvHb_PRk
(long-term followup of Oxycontin patients originally selected for doing well)