Comprehensive Pain Management

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May 27, 2020

World wind Tour……

- Why we care
- A few procedures
- Brief touch on medications

- “An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.”

International Association for the Study of Pain (IASP)

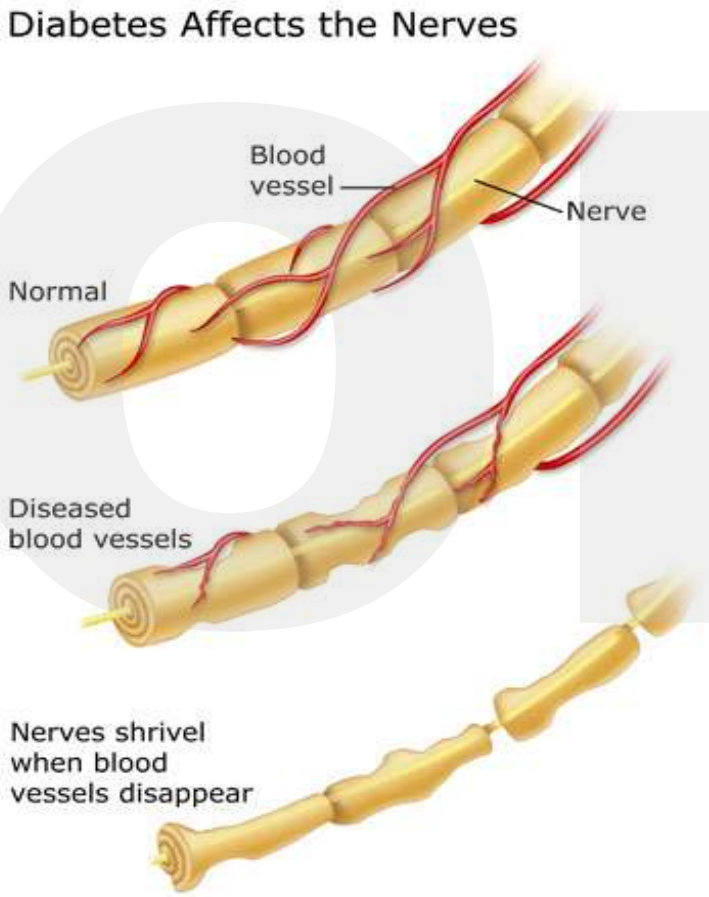
Acute Pain, why we care:

- ↑ in ACTH, cortisol, ADH, angiotensin, aldosterone, glucagon, etc.
- ↑ in gluconeogenesis, hyperglycemia, insulin resistance, muscle protein catabolism, lipolysis
- ↑ in heart rate, cardiac workload, peripheral vascular resistance, hypertension, coronary vascular resistance, myocardial oxygen consumption, hyper-coagulation, DVT
- ↓ respiratory flows & volumes, ↑ in atelectasis, ↓ cough
  ↑ sputum retention & infection.
- Depression of immune response, reduction in cognitive function
  Chronic pain, sleeplessness, anxiety, fear, hopelessness

“Suffering” is often what we are treating..

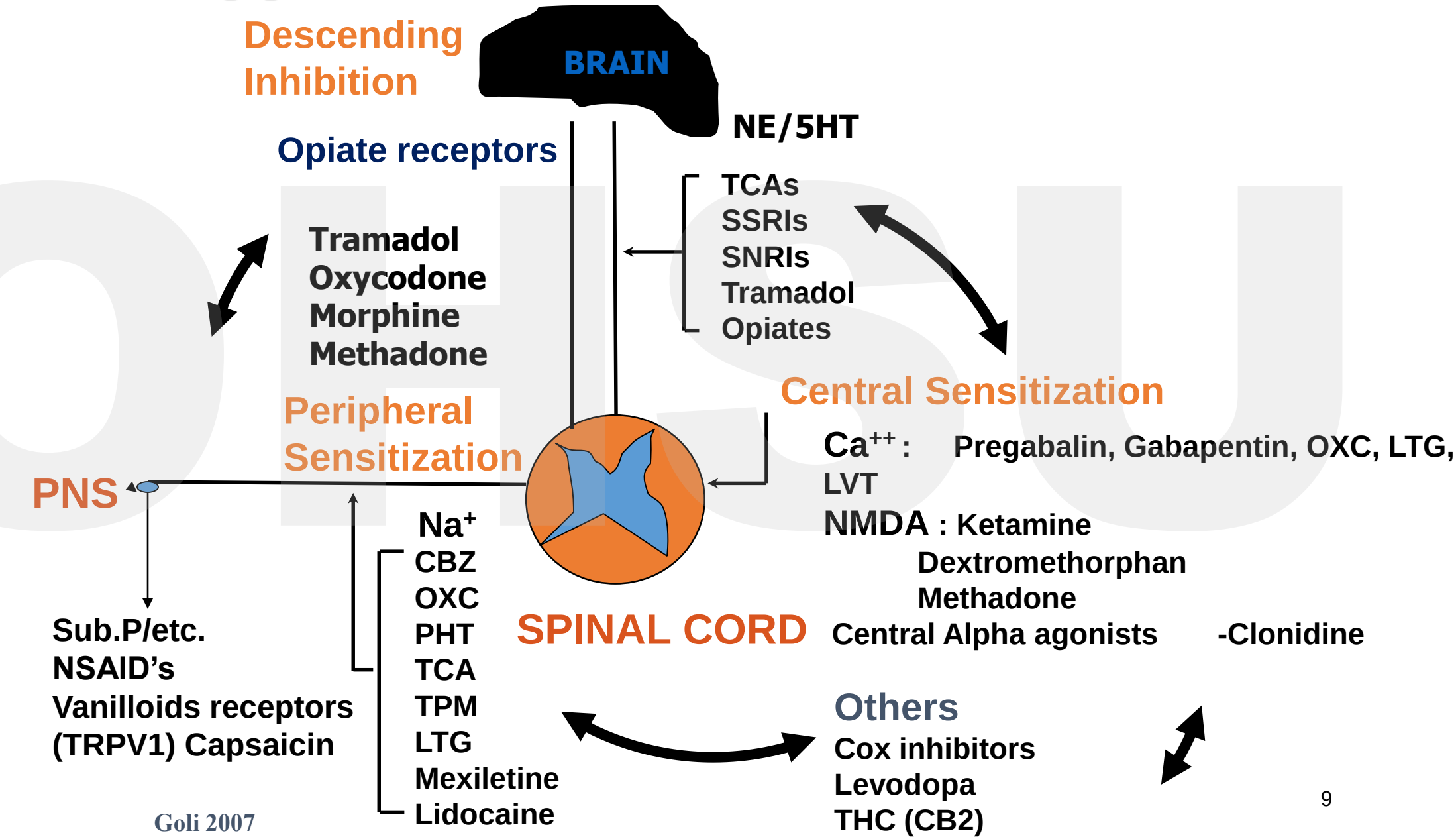
$635 Billion

Some concepts



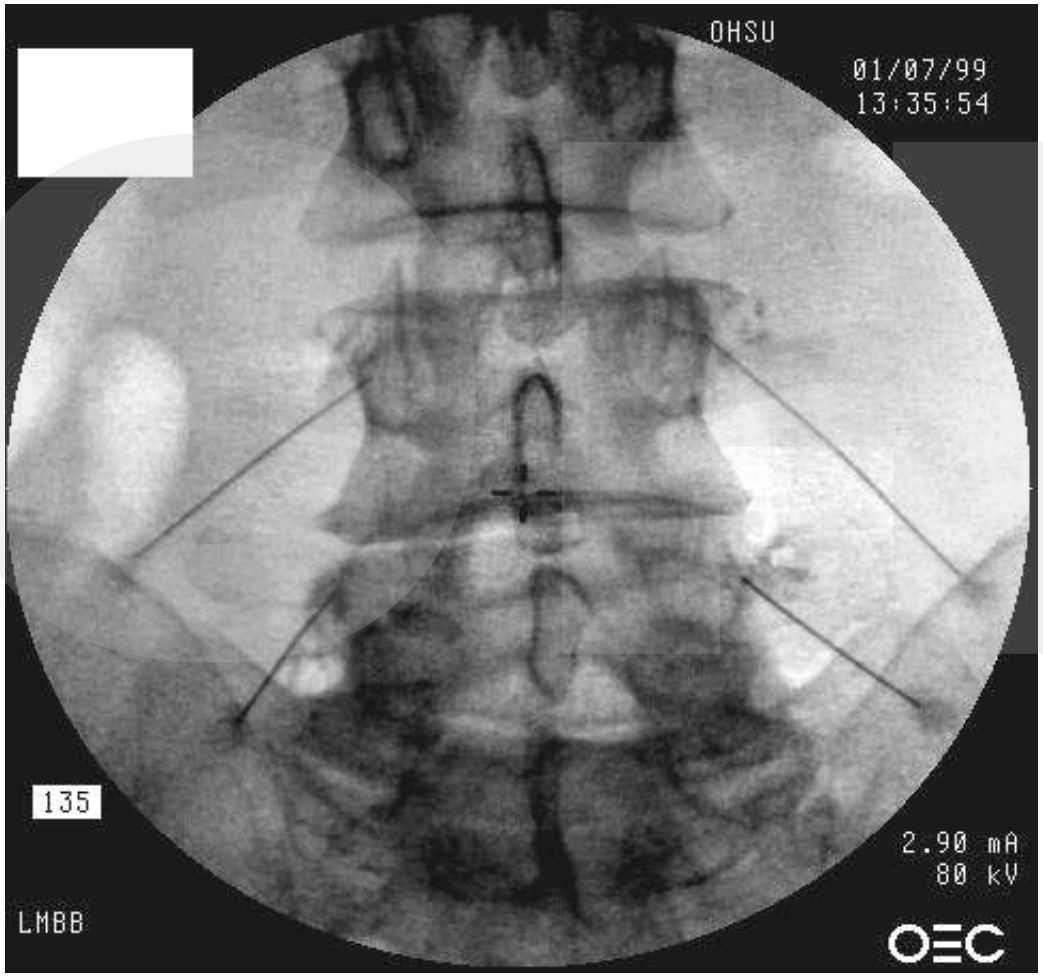
- The pain is caused by physiology gone awry
- Most nerve damage does not lead to ongoing pain
- Severity of the damage does not correlate well with severity of pain
- No test tells us if a person has pain or how bad it is
- The entire nervous system can be involved
- Pain can change everything in a person's life

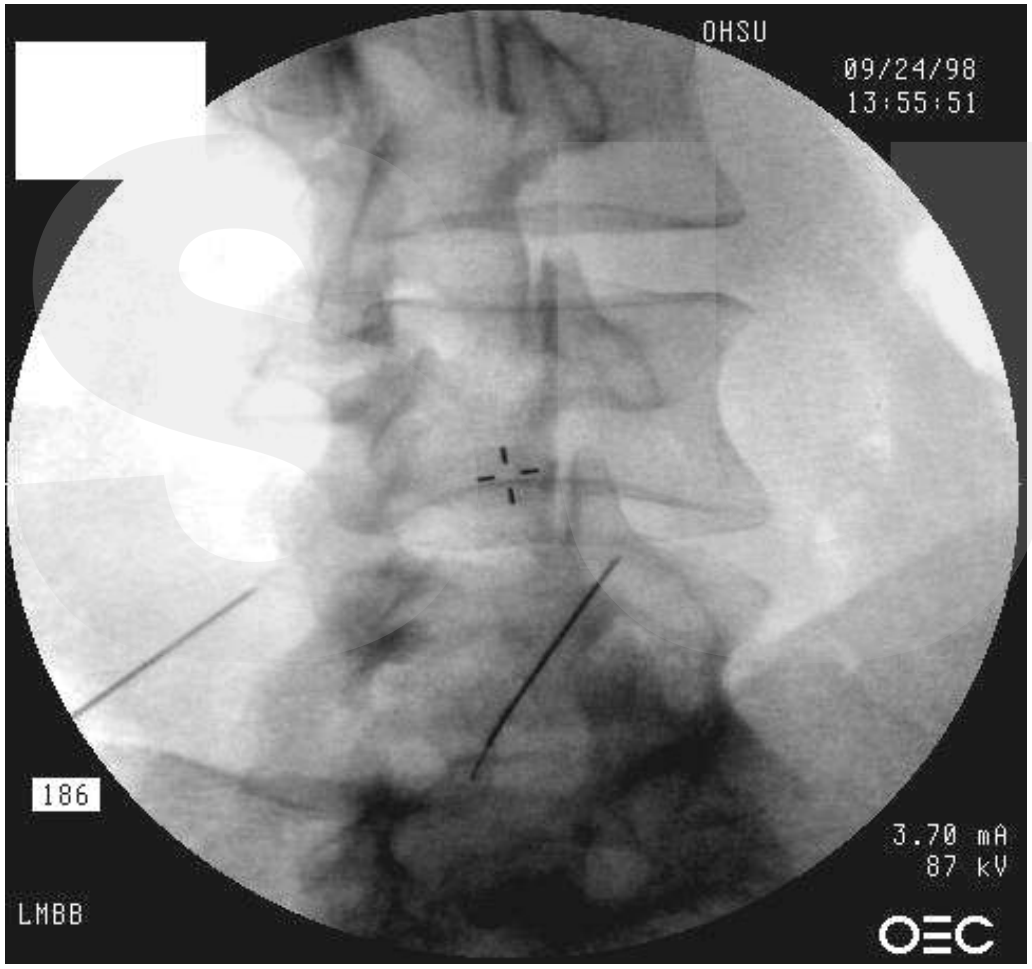
Mechanistic Approach to Treatment



Goli 2007

The Axial Spine- What Can We Do?



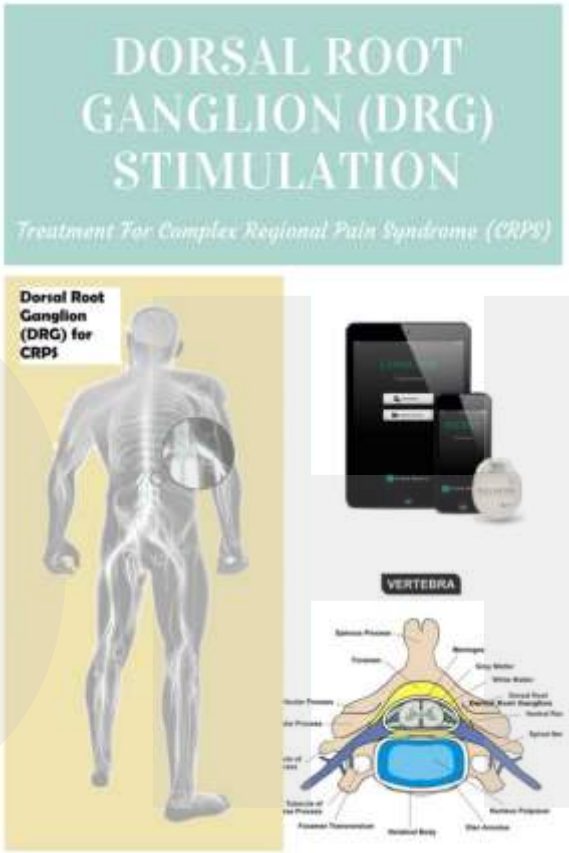


Lumbar TFESI Best Evidence

- Technique:
  - Fluoroscopically guided
  - Contrast injected real-time during injection
  - Medial, perineural injection
- One injection – no indication for a series[1,2]
- Acute lumbar radiculopathy

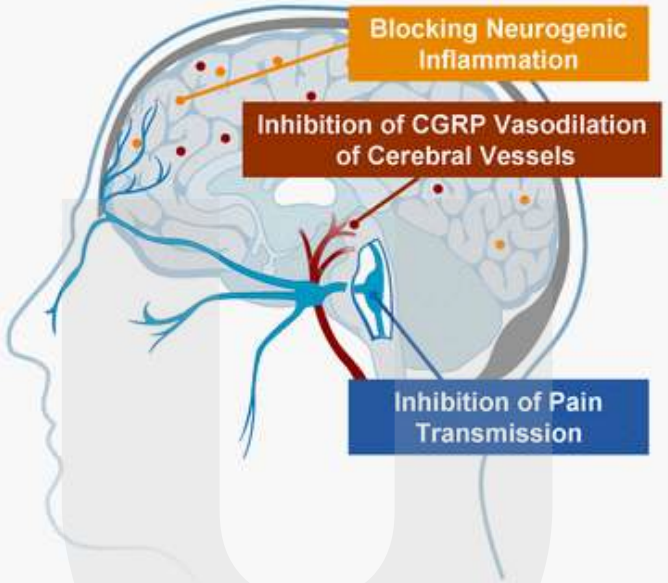
[1]Brown FW. Clin Orth Rel Res 1977;129:72-78
[2]Novak S. APMR 2008;89:543-52

And a array of others...



Proposed Role of Calcitonin Gene-Related Peptide (CGRP) Receptor Antagonists in Migraine

- CGRP is a potent neuropeptide expressed in the trigeminal system
- Increased during migraine and cluster headache
- CGRP receptor antagonists:
  - May act at multiple sites to block the actions of CGRP
  - Are not vasoconstrictors



Goadsby, P. et al., Ann Neurol 1988, 23, 193-196; Goadsby, P. et al., Ann Neurol 1990, 28, 183-187; Lassen, L. et al., Cephalalgia 2002, 22, 54-61; Levy, D. et al., Ann Neurol 2005, 58, 698-705; Fischer, M. et al., J Neurosci 2005, 25 (25), 5877-5883

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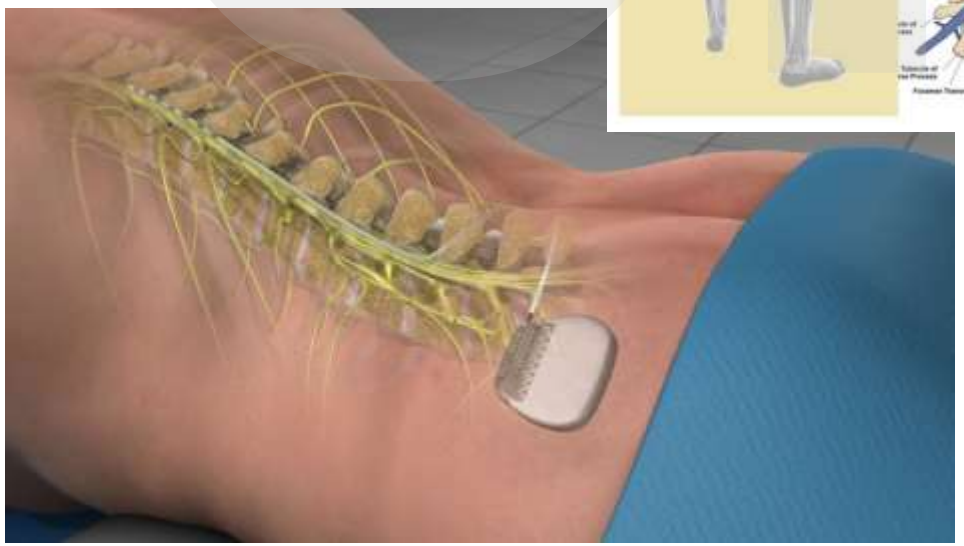
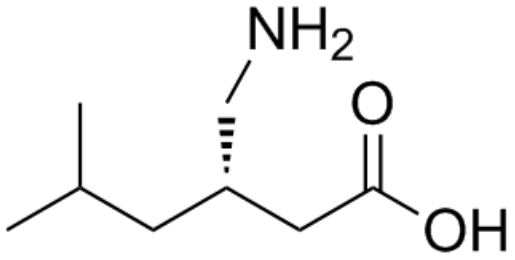


Pregabalin : better than gabapentin?

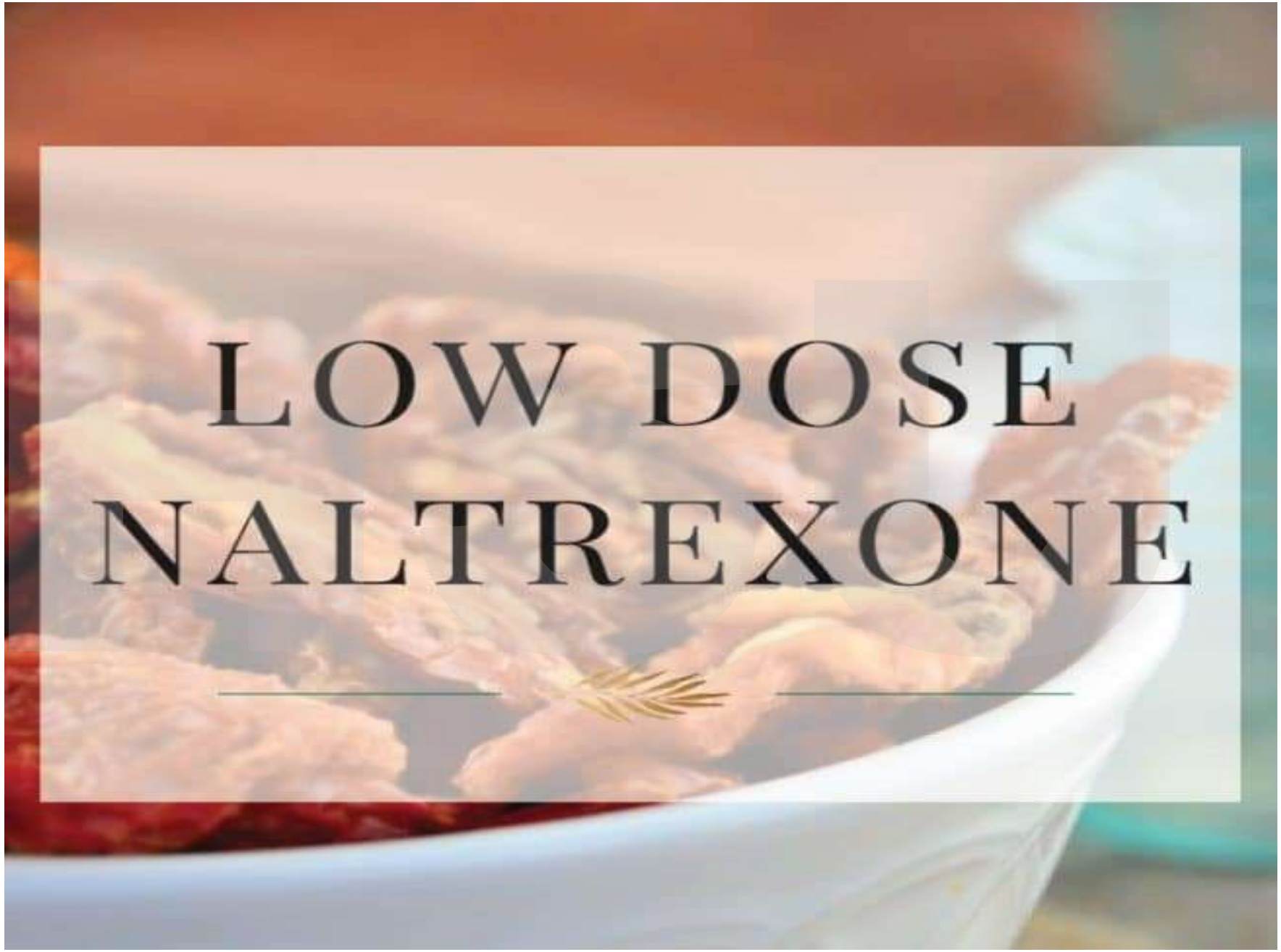
- Same binding site as gabapentin– binds more avidly
- More potent
- Linear absorption
- Longer elimination ½ life, BID or TID dosing
- Begins working in 24 hours or less

  Excellent evidence: 7 prospective trials published in PHN, DPN, spinal cord injury
- Use in treatment resistant patients



Stacey BR, et al, presented at ADA 2005. Durso de Cruz E, et al presented at ADA 2005

- 1984
- 50-300 mg/day
- 4.5 mg/day
- 2.5 mg/day



Mu

Delta

Opioid Trends

- We used to do long-acting opioids
- Now only short-acting and limited
- Moving towards buprenorphine not just for medication-assisted treatment but pain in general.

What are the numbers?

- 50 MEDs
- <90 MEDs
- Benzodiazepines

Surprise!
Maybe you aren't treating pain

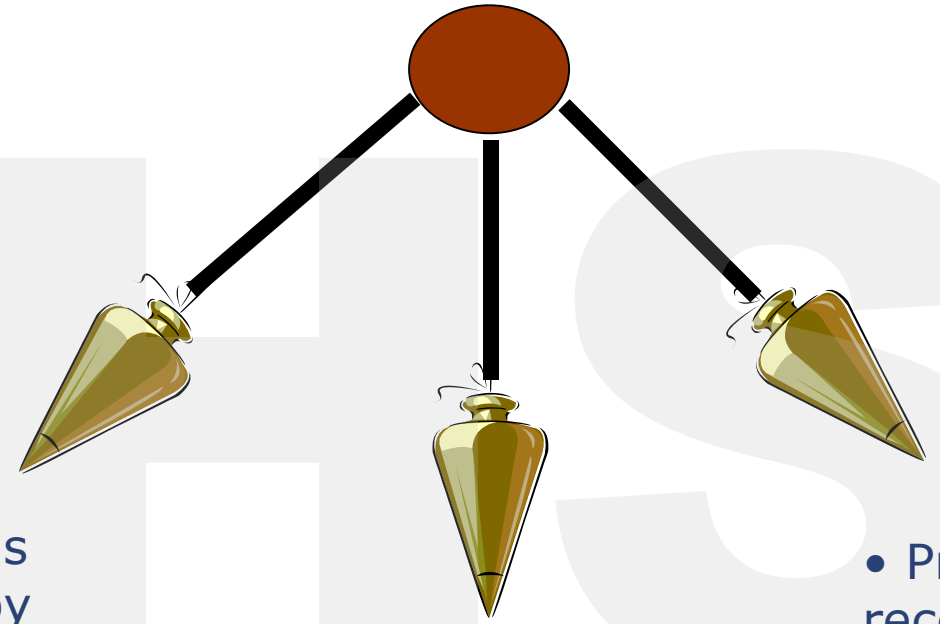
- Depression: if you have it, more likely to get an opioid[1,2] and depression doesn't respond to opioids[3]
- Anxiety and panic disorder: predict opioid prescription;[4] opioids are anxiolytic, ?reinforecment[5]
- Catastrophizing: more opioids, less response[3,7]
- Pain behaviors– not pain intensity, pathology, duration, demographics– but nonverbal communications of pain, distress, and suffering predicted opioid prescription[2]
- Smoking predicts opioid prescription[6]
- PTSD: in Veterans– opioids at higher doses with poorer outcomes[8]

1. Abs R, Verhelst J, Maeyaert J, et al. Jun 2000;85(6):2215-2222.
2. Turk DC, Okifuji A. Clin J Pain. Dec 1997;13(4):330-336.
3. Jensen MK, Thomsen AB, Hojsted J. Eur J Pain. Jul 2006;10(5):423-433.
4. Sullivan MD, Edlund MJ, Steffick D, Unutzer J. Pain. Dec 15 2005;119(1-3):95-103.
5. Haythornthwaite JA, Clark MR, Pappagallo M, Raja SN. Pain. Dec 2003;106(3):453-460.
6. Hooten WM, Shi Y, Gazelka HM, Warner DO. Pain. 2011 Jan;152(1):223-9.
7. Weissman-Fogel I, Sprecher E, Pud D. Exp Brain Res. Mar 2008;186(1):79-85.
8. Seal KH, et al. JAMA. 2012;307(9):940-947.

Understanding the Opioid Overdose Epidemic

- More people died from drug overdoses in 2014 than in any year on record.
- Highest death rates affect those 45-54 years-old
- The majority of drug overdose deaths (more than six out of 10) involve an opioid.
- Since 1999, the rate of overdose deaths involving opioids nearly quadrupled.
- From 2000 to 2014, nearly half a million people died from drug overdoses.
- 78 Americans die every day from an opioid overdose.

Can We Catch The Pendulum?



Avoidance

•Will not prescribe opioids for any reason - Driven by fear of regulatory action or antiquated views of addiction exaggerating the perception of risk

Balance

•Rational pharmacology, application of principles of addiction medicine

•Tailored therapy to risk in individual patients

Widespread Use

• Prescribing without recognition of dangers

Passik, S.

Where did opioid go wrong?

- No defined pathology
- Opioids as focus of treatment
- Mal-alignment of goals: “no pain” vs ?
- No assessment of mental health
- Acute pain short term treatment evolved into chronic escalating opioid therapy
- No patient responsibility, she was a passive recipient of pain meds
- No escape clause

Factors Favoring Prescription Drug Abuse

- Characteristics desired in drug of abuse
  - Rapid onset
  - Brief duration
  - High lipophilicity
  - Solubility or vaporization potential
  - "Feel it work"
- PROTOYPE: heroin

- Prescriber practices that might favor abuse
  - Symptom contingency (prn)
  - "Pseudoaddiction" (inadequate treatment, leading to further efforts to procure effective treatment)
  - Poor patient selection and/or monitoring
  - Poor documentation
  - Not questioning

Physician issues

- Inadequate education
- Inadequate patient evaluation
- Inadequate documentation
- No fixed criteria for initiating/tapering opioids
- “Special” patients/relationships
- Noncritical empathy
- Dishonest/corrupt

The Four A's

- **A**nalgesia: does the patient have effective pain relief?
- **A**dverse effects: are they severe, limiting, or are they controlled?
- **A**ctivity: evidence of increased function with opioids? meeting activity goals?
- **A**berrant Behavior: screen/monitor
- Not getting the right answer on 4As?

TIME TO STOP!

Passik SD, Weinreb HJ. Managing chronic nonmalignant pain: overcoming obstacles to the use of opioids. *Adv Ther*. 2000;17:70-83.

What I try to do

- I use opioids in a minority of chronic pain patients
- I focus on treating the baseline pain and the distress that goes with it. Typically this is what motivates patients to seek treatment.
- I work on strategies to reduce distress
- I tell patients that their overall health, including mental health is a major factor in their pain
- I rarely focus on pharmacological treatment only
- My pharmacological approach is polypharmacy– not just the opioid
- I stop ineffective treatments, patients usually feel better

Thank You!!!!

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