Optometric Education Consultants

Treatment of Pain
Opioid Choices and Considerations

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Mid-Winter Getaway
Optometric Education Consultants
Sunday, January 28, 2024

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Disclosures- Greg Caldwell, OD, FAAO

All relevant relationships have been mitigated

- Lectured for: Alcon, B&L, BioTissue, Dompé
  - Disclosure: Receive speaker honorariums
- Advisory Board: Dompé, ImmunoGen, Iveric
  - Disclosure: Receive participant honorariums
- I have no direct financial or proprietary interest in any companies, products or services mentioned in this presentation
  - Disclosure: Non-salaried financial affiliation with Pharmanex
- Healthcare Registries – Chairman of Advisory Council for Diabetes and AMD
- The content of this activity was prepared independently by me - Dr. Caldwell
- The content and format of this course is presented without commercial bias and does not claim superiority of any commercial product or service
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My Practice

I am a clinician first then a scientist

- Some are scientists first then clinician
- I need to simplify for patient and patient care.
- Science is great, but not good if there isn't a clinical application.
- Some lecturers are science based without clinical application.
- My lecture will be a hybrid. Showing clinical applications of the science

It is wonderful to have someone who's juggling so many aspects of optometry [scientific, clinical experience, teacher & lecturer]. It is refreshing and very informative. -Sarah

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Course Description

- This course will describe how to appropriately choose a pain medication based upon individual patient and drug factors.
- Additionally, opioid medications will be evaluated in terms of risk versus benefit, with an emphasis on pain levels and the potential for addiction.
- Case anecdotes will include management of ocular pain, with specific emphasis on oral/systemic medications and how to protect both patient and practitioner.

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Learning Objectives

- When given a patient case, choose an appropriate pain treatment plan for the management of ocular pain, in terms of drug choices based on pain level, dosing issues, and a monitoring plan for efficacy and toxicity.
- Identify and describe some of the potential signs, symptoms, and behaviors associated with opioid or substance abuse, and describe ways to respond to this issue.
- List systems available to evaluate a patient for potential opioid/substance abuse.
- Describe the treatment issues and options associated with the treatment of ocular pain in a patient with a drug abuse history.

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Two major types of pain:

Nociceptive Pain – normal processing of stimuli that damages normal tissues; how pain becomes conscious;

- responsive to non-opioids
  - examples: NSAIDs, acetaminophen, steroids
- responsive to opioids
  - examples: codeine, hydrocodone, tramadol

Neuropathic: abnormal processing of sensory input by the peripheral or central nervous system;

- treatment includes adjuvant analgesics
  - sleep aids, nerve pain meds, muscle relaxers, anxiolytics

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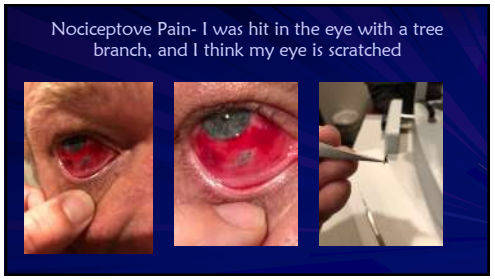

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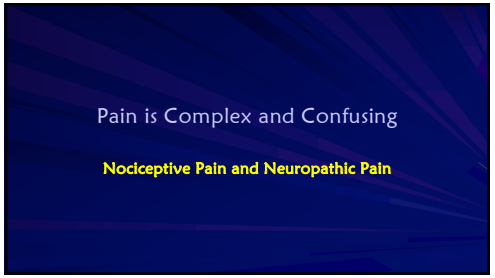

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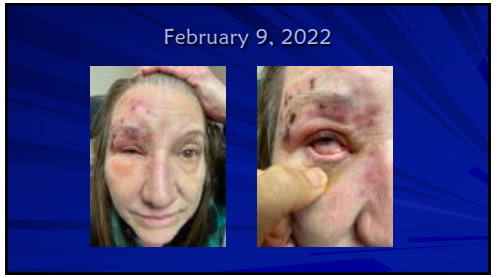

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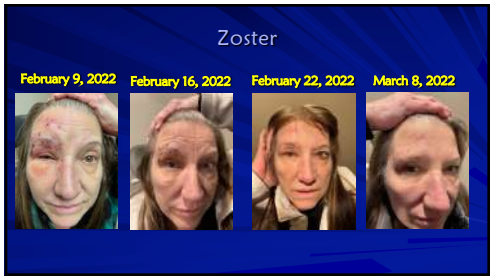

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Not to Confused with

Neurotrophic

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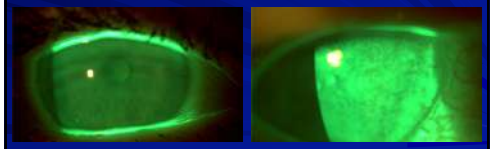
Stain Without Pain!

Actually, the OS is More Comfortable – What?



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Corneal Sensitivity Testing

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Cornea Sensitive Testing – Another Patient

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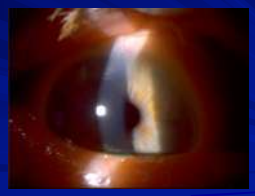
Cornea Sensitive Testing – Yet Another Patient



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What conditions have you used an Opioid?

- Audience discussion

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What Opioid do you prescribe?

- Audience discussion

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Drug Treatment Options…Neuropathic Pain

- Why is this relevant?
- Adjuvants – means "add on" medications
  - Some of them have addiction potential
    - Anti-seizure medications that address nerve damage/inflammation
      - MOA: work on the GABA system – similar to benzodiazepines (ex. Xanax)
      - Gabapentin (Neurontin) – controlled substance in multiple states
      - Pregabalin (Lyrica) – controlled substance in all 50 states
    - Anti-anxiety and sleep medications
      - Zolpidem (Ambien)
      - Alprazolam (Xanax), Lorazepam (Ativan), Diazepam (Valium)

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Pain Assessments and Scales

- Adds objective data to a patient's feeling of pain
  - It is a subjective problem to assess!
  - Remember…no patient should needlessly suffer!
- "Does the injury or wound or diagnosis fit the patient's presentation?
  - It is important to be able to assess the degree of pain in a patient.

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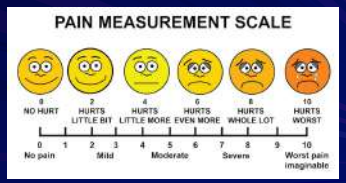
Combination Pain Scale…



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Drug Treatment Options… Nociceptive Pain

3 Groups of analgesics

- Non-opioids
  - Acetaminophen (Tylenol)
  - NSAIDs (Ibuprofen, naproxen sodium)
  - Glucocorticosteroids (methylprednisolone, prednisone)
- Opioids –
  - Codeine (Tylenol with codeine)
  - Hydrocodone (Vicodin)
  - Tramadol (Ultram)

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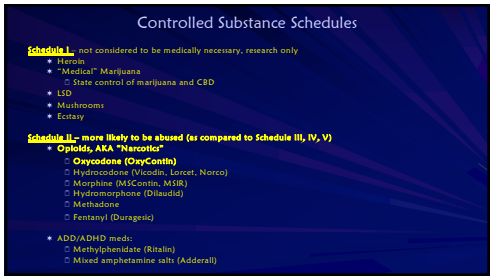

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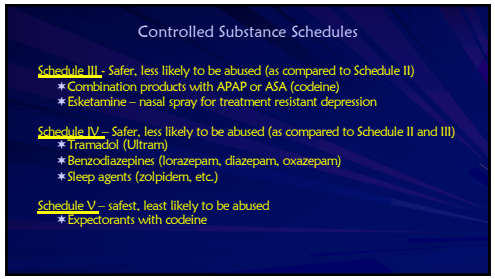

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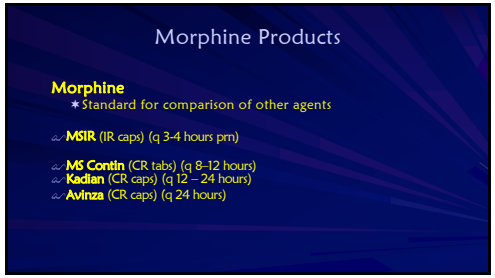

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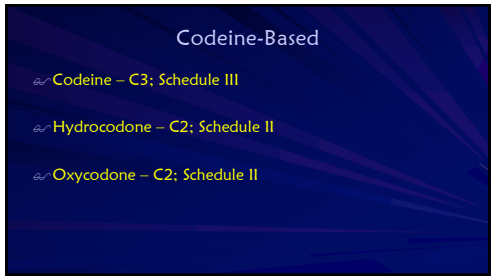

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Codeine tablets

- WEAK analgesic: commonly used, so MOST have heard of it!
- Add acetaminophen/aspirin – Schedule III
  - **Tylenol #3** = 300 mg acetaminophen & 30 mg codeine
- Add expectorant – Schedule V
  - If you think someone won't try to get their hands on "codeine cough syrup" as a drug of abuse, you'd be surprised!!!

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Oxycodone Products

Long-Acting, Extended-Release

OxyContin

Immediate Release: short-acting tablets

OxyIR (IR cap)
Roxicodone solution

with Acetaminophen:
Percocet and Endocet (oxycodone/APAP dose)

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OxyCONtin (Controlled release tablets (q 12 hours…once in a while q 8 hours); new formulation is out to help control abuse

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Hydrocodone Products

- Immediate-Release Products:

AS OF AUGUST 2014, hydrocodone products are ALL CII!!

Hydrocodone 7.5 mg + IBU 200 mg (Vicoprofen)

Hydrocodone + acetaminophen:
- **"Vicodin"** 5/300; 7.5/300; 10/300
- Lortab = 2.5/300, 5/300, 7.5/300, 10/300
- Norco = 5/325, 7.5/325, 10/325

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Miscellaneous

- **Fentanyl Patch** (Duragesic)
  - MOST potent opioid
  - Black Box Warning against use in acute pain and in opioid naïve patients
- **Methadone**
  - Typically reserved for morphine/codeine allergic patients

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Methadone tidbits…

- Chronic pain or opioid abuse deterrent
- 2-phase elimination
  - Alpha phase = 8 hrs
    - Offers pain control
  - Beta phase = 16+ hrs
    - Mitigates withdrawal symptoms
- Patient 1: On a short-acting pain med = likely being used to treat chronic pain
  - Twice per day dosing
- Patient 2: On methadone ONLY: lower doses
  - Once daily dosing

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Tramadol

Tramadol (Ultram) tabs
Tramadol with 325 mg APAP (Ultracet), Tramadol ER tabs

- Dual action: **mu** receptors & inhibits neuronal uptake of **serotonin** & **norepinephrine**
- Lowers seizure threshold; increases serotonin levels
  - watch drug interactions with other meds that ↑ serotonin
    - Selective serotonin reuptake inhibitors (SSRIs): fluoxetine/Prozac
    - Migraine meds ("triptans"): sumatriptan/Imitrex
  - AS OF AUGUST 2014, NOW A C4 (Schedule IV)
  - "tramies" = abuse potential; helps decrease withdrawal symptoms

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Opioid Allergies

- If a patient states "codeine allergic", ask appropriate questions…
  - "You have indicated that you have an allergy to codeine, can you describe what happens when you take codeine?"
    - This is SIGNIFICANT, because if a patient is truly allergic to codeine, then they are most likely allergic to morphine, hydromorphone, oxycodone, hydrocodone, and tramadol
    - AND…if they had an opioid IV after surgery, then their "reaction" may have been due to histamine release…
      - NOT always an allergic reaction

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Opioid Allergies

- DO YOU KNOW WHAT A PATIENT CAN TAKE?
  - Fentanyl
  - Methadone
  - Meperidine
- Assessing "allergies" appropriately helps practitioners sort through ACTUAL allergy potential and "placebo allergies"
  - Fear versus drug seeking

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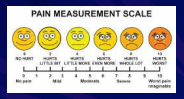
Specific Medications Using Numeric Pain Scale

Mild pain = 1 – 3

- Acetaminophen (APAP; Tylenol)
- Ibuprofen (Advil, Motrin)
- Naproxen sodium (Aleve)
- Tramadol (Ultram) - low dose



Moderate pain = 4 – 6

- Tramadol (Ultram) – mid to high dosing
- Tylenol with codeine (Tylenol #3)
- Acetaminophen with oxycodone (Percocet)
- Acetaminophen with hydrocodone (Vicodin, etc.)

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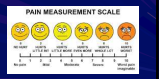
Specific Medications Using Numeric Pain Scale

Severe pain = 7 – 10

- Tylenol with hydrocodone (Vicodin, etc.) – higher doses
- Tylenol with oxycodone (Percocet, etc.) – higher doses
- Morphine (MSIR)
- Hydromorphone (Dilaudid)
- Fentanyl (Duragesic patch; Actiq lozenge on a stick)



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Opioid Effects/ADRs

- Sedation
- Euphoria – mu receptors
- Dysphoria/Hallucinations
- Pruritis – allergy versus normal release of histamine
- Nausea/vomiting
  - Triggers CTZ
  - Codeine "allergy"

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Opioid Effects/ADRs

- Confusion
- Miosis
- Respiratory depression – this is what kills a patient
  - ***Mixing opioids with other CNS depressants***
    - **Alcohol**
    - **Benzodiazepines**
    - **Muscle relaxers**
    - **Sleep agents**
    - **Antihistamines**
    - **Anti-seizure medications**

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Opioid Effects/ADRs

- Withdrawal symptoms:
  - Short half-life agents are more likely to cause abrupt withdrawal symptoms
  - Sweating
  - High sympathetic tone: increase in heart rate and blood pressure, mydriasis
  - Agitation
  - Irritation
  - Irrational behavior
  - Symptoms disappear with (immediate) use of an opioid

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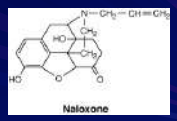
Opioid Antagonists

Naloxone (Narcan) & Naltrexone (ReVia)

- Used to treat opioid overdose


Morphine


Naloxone

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Mixed Opioid Agonist-Antagonist

- Exhibit partial agonist or antagonist activity at the opioid receptors
- **Agonist/Antagonist combinations for the TREATMENT of chronic pain**
  - **NOT appropriate for the treatment of acute pain**
  - **Morphine/Naltrexone (Embeda)**
  - **Oxycodone/Naltrexone (Troxyca ER)**
- **Schedule II controlled substance**

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Mixed Opioid Agonist-Antagonist

- Exhibit partial agonist or antagonist activity at the opioid receptors

Agonist/Antagonist combinations for the TREATMENT of opioid abuse/addiction

- **Buprenorphine (Buprenex)**
- Buprenorphine/Naloxone (Suboxone)
- **Schedule III**
- Adverse effects
  - Less respiratory depression & less abuse potential?
- Precipitate withdrawal in an opioid-dependent patient

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Painful Ocular Problems – things to consider…

- Acute or chronic?
  - YOU are in charge!
  - Legal and ethical issues – do not allow yourself to be bullied by the patient!
- Work with other practitioners!
- Only a pain specialist should write RXs for CII medications for chronic pain issues
  - If something looks suspicious, then make inquiries! Especially before you write an RX for a drug that can be abused and/or sold!

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Painful Ocular Problems – things to consider…

- Use the tools that are available!
  - State databases
    - **PDMP** = **P**rescription **D**rug **M**onitoring **P**rogram
  - Pharmacists

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Tolerance

- Escalation of dose to maintain effect (analgesia or euphoria)
  - Happens to everyone
- Regarding euphoria = may be life threatening because respiratory depression does not show much tolerance

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"True Addiction" (formerly "psychological dependence")

- Compulsive use despite harm
- Many times triggered by cravings in response to specific cues
  - Lifestyle is geared to the acquisition of the drugs
  - Borrowing from others, injecting oral formulations, prescription "loss", requesting specific drugs (not always a sign…as some drugs just work better)
- Quality of life is not improved by the medication and eventually it becomes compulsive ("wanting without liking")
- Relapse is very common even after "successful" withdrawal…it is a relapsing disease that is incredibly hard to treat

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Identifying Behaviors of Abuse/Addiction

- New patients that don't seem to "fit"
- "fast talkers"
- Strange allergies
- Excuses for "loss" of meds or why they need "a strong pain medication"

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Ways to respond

- Avoid getting "bullied"
- Avoid acting like you are judging the patient
- State data bases
  - Call your local pharmacy/pharmacist
- Legal/ethical issues
  - If you didn't write it down, then it didn't happen!
  - If you accidentally give an addict a script for a pain medication, you won't get into "trouble"…

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Substance abuse history…

- Avoid all opioids in a patient with a history of heroin use
  - This includes tramadol
  - May trigger dopamine reward and the drug "need"
  - Stick with higher doses of a NSAID +/- acetaminophen
- Patients with abuse history for other substances (ex. Benzodiazepines, alcohol, amphetamines)?
  - It is a judgement call
  - Some evidence to suggest that all addictive meds should be avoided!

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Conditions Which May Require Pain Management

- Large cornea abrasions
  - Cornea burn
  - PRK/PTK
- Orbital trauma
- Orbital blowout fractures
- Scleritis

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