

Common Prescription Writing for Dentists

Commonly Prescribed Drugs

- Non steroidal anti-inflammatory agents
- Analgesic agents
- Antimicrobial agents
(antibiotics, antifungal, antiviral)
- Corticosteroids
- Antianxiety/sedative agents (requires special permit in NYS for dentists)

PHARMACOLOGICAL THERAPY

- Select the appropriate drug
- Prescribe the appropriate dose
- Administer by the appropriate route
- Schedule the appropriate dosing interval
- Anticipate, prevent and manage side effects

PAIN

“an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage”

*IASP, 1986

PAIN

- Noxious Stimulus (Nociception)
- Central Modulation
- Perception & Interpretation
- Emotional State (Suffering)
- Reaction or pain behavior

ACUTE vs. CHRONIC PAIN DISORDERS

Need to differentiate in order to provide appropriate treatment

Acute Pain

- Identifiable injury or disease focus
- Usually self-limited, resolving over hours to days associated with a reasonable period for healing
- Objective autonomic phenomenon
- Responds to treatment – NSAIDs, opioids, corticosteroids, benzodiazepines

Chronic Pain

- Pain that persists greater than 3-6 months
- May reflect separate mechanisms from the original insult
- Sometimes no insult is identified
- Vague descriptions of pain, difficulty in describing timing and localization
- Lack of heightened autonomic activity
- Pain described with terms that have emotional associations
- Interferes with activities of daily living

Chronic Facial Pain

- Estimated 7-8 million people - about 4% of the U.S. population over the age of 18, report pain in the face, jaws, or TMJ.
- 70% are female - which accounts for approximately 6% of the female population.

NIDCR/NIH Data. JADA, 2000.

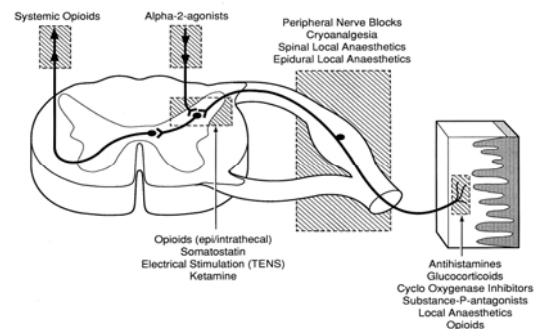
CHRONIC PAIN SYNDROME

- Intractable pain greater than 4-6 months
- Marked alteration in behavior with depression and/or anxiety
- Marked reduction in daily activities
- Excessive amounts of medications and fragmentation of medical services
- No clear relationship to an organic disorder
- History of multiple non-productive tests, treatments and surgeries

PAIN MANAGEMENT

- Pharmacological Therapy
- Injection Therapy (Local anesthesia, steroids)
- Exercise Therapy
- Physical Medicine
- Behavioral Medicine
- Complementary & Alternative Medicine
- Intravenous Therapy
- Surgical Therapy

Pain Management Strategies



Pharmacological Therapy of Pain

- Major Questions to be Answered:
 - Acute or Chronic?
 - Is etiology being addressed?

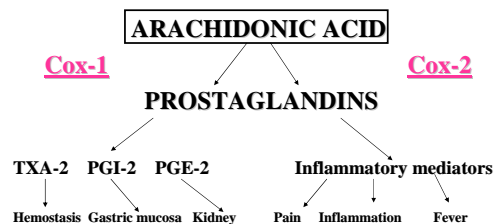
Acetaminophen (Tylenol)

- Principal active metabolite of phenacetin
- Antipyretic – hypothalamus
- Analgesic – inhibit PG synthesis in CNS
- Anti-inflammatory – minimal
- *Does not* inhibit platelet aggregation, affect prothrombin responsiveness, or produce GI ulceration
- **Safe in pregnancy and breast-feeding

NONSTEROIDAL ANTI-INFLAMMATORY DRUGS

Aspirin	Ketorolac (Toradol)
Diffenlisal (Dolobid)	Naproxen (Naprosyn)
Ibuprofen (Motrin)	Nabumatone (Relafen)

Mechanism of Action of NSAIDs



CYCLO-OXYGENASE INHIBITORS (COX-1, COX-2)

- COX-1 = housekeeping prostanoid biosynthesis
- COX-2 = inducible by inflammation
- Therapeutic effect through inhibition of COX-2 iso-enzyme with reduction of certain PG's
- COX-2 inhibitors = improved benefit/risk ratio by producing anti-inflammatory effect without the unwanted GI, antiplatelet and renal effects that accompany inhibition of PG's mediated by COX-1

OPIOIDS (NARCOTICS)

- Opioid receptors – mu, kappa, delta, sigma
- CNS effects – analgesia, euphoria, sedation, **respiratory depression**
- Produce analgesia over a wide range of doses
- No ceiling effect to analgesia – linear to the point of unconsciousness
- Tolerance to analgesic effect
- Cross-tolerance can develop between agents
- Dependence

OPIOIDS

Adverse Effects

- **Respiratory depression** – tolerance develops rapidly
- Mental clouding or confusion
- Miosis – no tolerance/accommodate
- Nausea & vomiting – tolerance develops rapidly
- GI constipation – tolerance develops slowly, if at all!!
- Urinary retention
- Pruritis and flushing
- Histamine release (some narcotics)

Contraindications

- COPD
- Biliary obstruction
- Urinary retention
- MAO inhibitors

OPIOID ANALGESICS

- Codeine
- Oxycodone
- Hydrocodone
- Morphine
- Oxymorphone
- Hydromorphone
- Fentanyl
- Methadone

OPIOID ANALGESICS

Not Recommended

- Propoxyphene
- Meperidine (nausea, vomiting)
- Partial agonists (Buprenorphine)
- Agonist-antagonists (Butorphanol)

Prescribed analgesics/post-op/po

- Tylenol #3, Disp: #24, Sig: i-iiq4h prn pain
- Ibuprofen 800mgs, Disp: #30, Sig: Iq8h
- Vicodin 5mg, Disp: #24, Sig: iq4h prn pain (hydrocodone)
- Vicodin ES (or 10mgs), iq6h prn pain
- Percocet 5mg or 10mg, Disp: #24, Sig: iq4h prn pain (oxycodone)

Antimicrobials

- Antibiotics (Oral flora-aerobes and anaerobes)
 - Amoxicillin
 - Clindamycin
- Antifungals (Candidiasis)
 - Nystatin
 - Mycelex
- Antivirals (Herpes simplex)
 - Acyclovir and others

Antibiotics

- Pen VK 500mg, Disp #40, Sig: iq6h
- Amoxicillin 500mg, Disp#30, Sig: iq8h
- Augmentin 500mg, Disp #30, Sig iq8h
- Clindamycin 150 - 300mg q6h for 10 days

Remember

- Some drugs require monitoring of CBC, liver enzymes, etc
- Drug interactions
 - Antibiotics and birth control pills
 - Synergistic effects of narcotic analgesics and other CNS depressants the patient may be on

Drugs for non-acute pain

Anxiolytics

- If used for enteral sedation in the office a separate license and additional training is required in some states (NY)

Benzodiazepines

• Alprazolam (Xanax)	12-15 h
• Clonazepam (Klonopin)	18-50 h
• Chlordiapoxide (Librium)	5-30 h
• Diazepam (Valium)	20-50 h
• Flurazepam (Dalmane)	2-3 h
• Lorazepam (Ativan)	10-80 h
• Midazolam (Versed)	2 h
• Oxazepam (Serax)	5-15 h
• Temazepam (Restoril)	0-20 h
• Triazolam (Halcion)	1.5-5 h

Drug Enforcement Agency

- www.dea.gov
- Federal laws govern manufacturing, prescribing and dispensing
- Requires DEA # to dispense “Schedule drugs”
- New York State Public Health law requires that prescriptions be written on specific forms

Controlled Substances

- Schedules I-V
- I – No legal medical uses, except research.
High potential for abuse. (heroin, opium derivatives, hallucinogens)
- II – Legal medical uses and a *high* abuse potential
(demerol, fentanyl, dilaudid oxycodone, methadone, amphetamines, barbiturates)

Controlled Substances

- III – *Lesser* degree of abuse potential and *moderate* dependence.
 - Less than 15mg of hydrocodone, less than 90mg of codeine, ketamine
- IV – *Low* abuse potential and *moderate* dependence.
 - Propoxyphene, benzodiazepines
- V – *Very low* abuse potential and *moderate-low* dependence
 - Cough preparations with codeine

Prescription Writing

- Drug
- Dosage
- Amount
 - Disp: → “dispense”
 - Examples:
 - Forty (40) tabs
 - Thirty (30) tabs
 - = (the number per day)x(the number of days). Example:
 - Pen V 500mg is dosed q6h for 10 days for odontogenic infection.
 - q6h = 4/day
 - (4/day) x 10 days = 40 tabs
- Instructions in detail
- Generic vs. brand (“D.A.W.”)
- Legible!!
- Electronic forms of submission to avoid error

Prescription Writing

- Heading
- Prescriber information
- Patient information
- Superscription-Rx (Recipe)
- Inscription
- Transcription (Signature)
- Refill information
- Signature of Prescriber

Prescriber Information

- Name, address, phone #
- License #
- Drug enforcement administration #
- Safeguard your prescription pads
- Institution prescription
 - Institution DEA #
 - Resident Stamp

OFFICIAL NEW YORK STATE PRESCRIPTION

SIDNEY B. BERG, D.O.B.
830 WEST 148TH STREET
VC 7-226
NEW YORK, NY 10032
D.P.C. 305-4620
L.I.C. 03608

PRESCRIPTION NO. _____

Patient Name _____ Date _____

Address _____

City _____ State _____ Zip _____ Age _____ Sex M F

Rx _____

Prescriber Signature _____

THIS PRESCRIPTION WILL BE REFILLED GENERALLY UNLESS PRESCRIBER WRITES OTHERWISE

REFILLS None _____

PHARMACEUTICAL _____

018XTL 42

PHARMACEUTICAL TEST AREA

Pediatric Dosing

- Clarke's rule (age)
- Young's rule (weight)
- mg/kg/day divided into "x" # equal doses
 - Dependent on pharmacokinetics of the specific drug
- One teaspoon = 5 cc

Common Abbreviations

- | | | |
|---------|----------------|------------------|
| • ac - | ante cibum | before meals |
| • bid - | bis in die | twice a day |
| • gtt - | gutta | a drop |
| • hs - | hora somni | at bedtime |
| • pc - | post cibos | after meals |
| • po - | per os | by mouth |
| • q_h - | quaque hora | every_hours |
| • qid - | quarter in die | four times a day |
| • tid - | ter in die | three..... |

(UN)OFFICIAL NEW YORK STATE PRESCRIPTION

FRED JONES, DDS
1342 WEST 67TH ST
NEW YORK, NY 10248
(212) 555-1234
LIC. 5555555

PRACTITIONER DEA NUMBER
□ □ □ □ □ □ □ □

Patient Name _____ Date _____

Address _____

City _____ State _____ Zip _____ Age _____ Sex **M**F

R_x **VICOPROFEN**
Disp: **16 tabs**
Sig: **1 tablet q4-6 h** **5**

Prescription Signature **X** (signature) (date) (void)
THIS PRESCRIPTION WILL BE FULFILLED GENERALLY UNLESS PRESCRIBER WRITES "DOW" IN BOX BELOW

REFILLS None _____

GHP2L1 21

Dispense As Written

PRINCIPLES OF TREATMENT

- *Establish a diagnosis (and etiology)
- *Prescribe treatment that is the most logical for the diagnosis

Good news: from today's lecture
you do not need to memorize
long lists of drugs