Applied Pain Management in Primary Eye Care
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Pain management is an integral part of emergency eye care yet can often be overlooked. This lecture covers treatment options from placebo to scheduled medicines, and rapidly evolving prescribing guidelines in OTC and Rx drugs. Case examples of painful ocular conditions will be covered in a grand rounds format with pain management options discussed.

I. Definition of Pain
   A. The International Association of Pain defines it as: an unpleasant sensory and emotional experience most often associated with actual or potential tissue damage or described in terms of such damage.

II. Sensory Aspects
    A. Physiologic Changes
    B. Flight or Fight

III. Emotional Aspects
    A. Most overlooked portion of pain management
    B. Past Experiences
    C. Fear
    D. Aware of Consequences
    E. Suggestions and Placebo affect

IV. Objective Measure of Pain
    A. There are none.
    B. Physiologic Changes
       1. Heart Rate
       2. Blood Pressure
       3. Pupil Dilation
       4. Sweating
       5. Decreased blood flow to the skin
    C. Mistrust People in Pain
       1. Manipulate employer/Worker’s comp
       2. Feed addiction
       3. Sell prescription
    D. Drug Dependency
       1. Increased tolerance
       2. Physical dependence
       3. Addiction

V. Subjective Measure of Pain
    A. Borg Scale
    B. Goal of Pain Management is not zero pain
    C. Pain Thresholds
       1. Factors that decrease pain threshold
          a. Insomnia
          b. Fatigue
          c. Nausea
          d. Anxiety
          e. Fear
          f. Depression
       2. Factors that increase pain threshold
          a. Diversion
          b. Sympathy/Understanding

VI. Types of Pain
    A. Acute Pain
       1. Follows injury tissue or damage
       2. Well defined onset
3. Obvious physical signs
4. Easy to localize
5. Disappears when body heals

B. Chronic Pain
1. May not have well defined onset
2. Can last months to years
3. May have no physical signs
4. May be accompanied by depression
5. May require higher dosages of meds for same effect

VII. Doctor’s Concerns for Prescription
A. Insurance and Paperwork Issues
B. Side Effects from oral medicines
C. Addiction

VIII. Complete Pain Management
A. Acknowledgement of severity of patient’s pain
B. Sympathy
C. Reassurance
D. Giving a prescription gives the control back to patient

IX. Ocular Pain Management Options
A. Reassurance only
B. Placebo
   1. 32% of people respond to placebo affect
   2. Ethical considerations
   3. Doctor’s bias
D. Topical NSAIDS
   1. Mechanism of Action of NSAIDS
   2. Adverse reactions
   3. Combination of Topical NSAID and Bandage CL
E. Oral Over-the-Counter Analgesic
   1. Used for Mild to Moderate pain
   2. Mechanism of Action
   3. Examples with pro’s and con’s

X. Acetaminophen
A. Liver toxicity
B. No anti-inflammatory properties
C. No Rx strength dosages
D. Currently being scrutinized by FDA
   1. May reduce max daily dosage to 3250 mg from 4000 mg
   2. May reduce max single pill dosage to 650 mg
   3. May eliminate combo drug preps
   4. May eliminate acetaminophen-narcotic compounds
E. Accidental overdose

XI. Aspirin
A. GI problems
B. Contraindicated in children
C. Current baby aspirin recommendations

XII. Ibuprofen
A. Use cautiously in patients with hypertension and diabetes
   1. Rx dose is double OTC dose
B. Cardiac questions raised after Vioxx

XIII. Naproxen Sodium
A. Less frequent dosing
B. Use cautiously in patients with cardiovascular disease, diabetes

XIV. Prescription Options
A. Cox-2 Inhibitors
   1. Discussion of controversy surrounding
   2. Rx recommendations
   3. Cautions

XV. Schedule II and III Medicines
A. Definition of Schedule II and III
   1. Potential for abuse
   2. Accepted medical use
   3. Abuse of drug may lead to physical or psychological dependence
   4. Contraindications
      a. Head injury
      b. Acute abdominal pain
      c. Patients with impaired kidney or liver function
   5. Adverse Reactions
      a. Sedation
      b. Nausea
      c. Lightheadedness or dizziness
      d. Respiratory depression

XVII. Drug Enforcement Administration
   A. Tracking
   B. Rx requirements
   C. State differences

XVIII. Helpful Websites
   A. www.medscape.com
   B. www.medlineplus.gov
   C. www.rxlist.com
   D. www.drugstore.com
   E. www.epocrates.com

References
9. Wong M, Chowienczyk P, Kirkham B,: Cardiovascular issues of COX-2 inhibitors and NSAIDs, Australian Family Physician. 34: 945-48 200
13. FDA Advisory Committee Briefing Document, VIOXX Gastrointestinal Safety. NDA 21-042, s007 2001