Managing Cancer Pain
Building an App for that…….

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Pain Management Resource Team

Objectives
► Participants will be able to:
  ▪ List four processes involved in the pain pathway
  ▪ State the components of a comprehensive pain assessment
  ▪ Define “balanced analgesia”
  ▪ Identify appropriate advanced techniques for cancer pain

Prevalence of Cancer Pain
► reported to be 30% to 40% for patients with early disease
► estimates as high as 70% to 90% for patients with advanced disease
► in advanced, incurable cases approximately 64%
► chronic pain after cure 33%

Causes of Pain in Cancer Patients

- Disease
- Treatment
- Invasive procedures
- Unrelated to cancer


Basic Anatomy, Physiology and Types of Cancer Pain

Pain Pathway

4 processes involved:
1. Transduction
2. Transmission
3. Perception of pain
4. Modulation

1. Peripheral tissues
2. Spinal cord
3. Brain
4. Descending modulation
Types of Pain Syndromes in Cancer Patients

- **Noceiceptive**
  - **Somatic** - well localized, tender, aching, (arthritis, incisional, bone mets)
  - **Visceral** - poorly localized, cramping pressure, (bowel obstruction, liver mets, pancreatic cancer)

Types of Pain (con’t)

- **Neuropathic**
  - involves nerve damage, burning, shooting, numbness, tingling, (post-herpetic neuralgia, post-mastectomy pain syndrome, phantom-limb pain, chemo-induced neuropathies)

- **Temporal Aspects**
  - Acute
  - Persistent/Chronic
Comprehensive Assessment of Pain

- Detailed histories
  - Pain/pain treatment
  - Medical
  - Psychosocial
- Physical examination
- Diagnostic tests
- Observable physiologic signs
- The most important tool:
  - Patients Self Report


Assessment of Pain

- WILDA
  - Words (ex. aching, burning...)
  - Intensity (0-10)
  - Location (all sites)
  - Duration (constant, episodic)
  - Aggravating and alleviating factors (what makes the pain better or worse)

Pain Assessment in the Elderly

- Poor memory, depression and sensory impairment may make getting pain information from the patient difficult
- Use of standard tools
- Pain assessment by proxy
How does the pain affect?

- Sleep
- Appetite
- Energy
- Activity
- Relationships
- Mood

Experiencing other symptoms?

- Nausea/vomiting
- Constipation
- Itching

Related to the pain or the medications?

- Sleepiness
- Confusion
- Urinary retention
- Weakness

Reassessment of Pain

- Routinely
  - q 2h, q 4h, q 8h (acute)
  - Weekly, monthly (chronic)
- After pharmacologic intervention
  - 30 min after IV
  - 60 min after PO
  - 24h after Transdermal
It is impossible to treat pain appropriately if it is not assessed appropriately!

Treatment of Cancer Pain Required Tools

Pharmacologic Nonpharmacologic

Should always be both

Pharmacologic Approaches to Cancer Pain Management

“Balanced Analgesia”

- Non-opioids
- Adjuvants/Coanalgesics
- Opioids
- Advanced Techniques
  - Patient-controlled analgesia
  - Regional analgesia
  - Invasive methods

- Provides better pain relief
- Fewer side effects
- Opioid-sparing
**Managing Cancer Pain**

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### Non-opioids

- **Acetaminophen**
- **Aspirin**
- **NSAIDs/Cox-2**

*First-line for mild to moderate pain*

"Unless contraindicated, any analgesic regimen should include a nonopioid drug, even if pain is severe enough to require the addition of an opioid."


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### Adjuvant Medications

- **Do not directly provide analgesia**
- **Used more extensively in chronic pain than acute pain**
- **Help with suffering**

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### Selected Adjuvant Medications

- **Antidepressants** - Ex: TCA (Elavil, Pamelor, Sinequan), SSRI (Paxil, Zoloft, Celexa, Lexapro), *SSNRI (Cymbalta, Effexor, Savella)*

- **Anticonvulsants** - Ex: Neurontin, Tegretol, Depakote, Klonopin, Dilantin, Gabapril, Topamax, Lamictal, Trileptal, Zonegran, Lyrica
Selected Adjuvant Medications

- **Benzodiazepines** - Ex: Valium, Ativan, Xanax, Halcion, Restoril, Klonopin, Versed
- **Misc. Agents** - Ex: Lidoderm 5% patch, Capsaicin, Emu oil

Combination Opioids

- Used for mild to moderate pain
- Usually given in combination with non-opioids
- Doses are limited due to non-opioid component
- Commonly used as rescue/breakthrough

- Codeine (Tylenol #3, Fioricet)
- Hydrocodone (Lortab, Vicodin)
- Oxycodone (Percocet, Percodan)
- Tramadol (Ultram, Ultracet)
Single-Agent Opioids

- Used for moderate to severe pain
- **No maximum dose**
- Can be given by many different routes
- Long-acting forms available for chronic cancer pain

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Single-Agent Opioids

- Morphine
- Hydromorphone
- Methadone
- Oxycodone
- Fentanyl
- Oxymorphone
- Tapentadol

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Benefits of Long-Acting Opioids in Chronic/Persistent Pain

- Avoids peaks and valleys
- Improves functionality
- Patients use less medication
- Patient satisfaction/compliance
- Easier medication surveillance
IV Pain medicines

- Drip
- PCA
- IV Bolus
- Medications
  - Fentanyl
  - Hydromorphone
  - Morphine
  - Methadone

IV PCA Advantages

- Improved patient satisfaction
- Improved pain relief
- Less sedation
- Less opioid consumption
- PCA pump allows for monitoring pain control
Epidural Analgesia

- Temporary is usually 2-4 days, but tunneled can go up to 6 months
- Delivery
  - Bolus (Morphine)
  - Continuous infusion (Fentanyl)
  - Patient-controlled analgesia (PCEA)
- Opioids and local anesthetics (bupivacaine, ropivacaine)

Regional Analgesia - Patient Criteria

- Localized pain
- Chronic Opioid Therapy
- Other Medical Problems – CHF, COPD, etc

Nerve Blocks

- Many insertion sites for blocks depends on area of interest
- Paravertebral Block:
  - Thoracotomies, thoracoscopies, lung biopsy
- Femoral Block:
  - Total Knee Arthroplasty, Lower Extremity amputation, ACL repair, Post-op knee surgeries
Nerve Blocks

► Axillary Brachial Plexus Block:
  ▪ Hand and elbow surgery, forearm fx manipulation

► Celiac Plexus Block:
  ▪ Pancreatic cancer

► Popliteal Block:
  ▪ Foot and ankle surgeries, foot amputation

► Periostatic Block:
  ▪ Prostate surgery, prostate biopsy

Peripheral Nerve Catheter PNC

► Provides continuous infusion of a local anesthetic at the surgical site.
► Similar devices can also be used as a nerve block
► Soaks the site with local anesthetic and works continuously for two to five days
► Portable and requires little management by caregiver or patient
► Can be sent home with patient upon discharge

Implantable Intrathecal Pumps

► Side effects such as nausea, vomiting, constipation, and sedation are reduced
► Places medication directly into the cerebrospinal fluid
► Much lower doses of medication is used compared to oral medication (1/300 OME)
► For chronic pain, after more conservative therapies have failed
Neurostimulator
▶ Delivers low voltage electricity stimulation to the spinal cord or targeted peripheral nerve to block the sensation of pain
▶ Implanted in the epidural space, stimulates the pain-inhibiting nerve fibers (Gate Control Theory), masking the sensation of pain with a tingling sensation (paresthesia)
▶ For chronic pain, after more conservative therapies have failed

Non-Pharmacologic Therapies
▶ Alternative
▶ Complementary
▶ Integrative

Nonpharmacologic Therapies
➢ Empowers patients
➢ Takes focus away from medications
➢ Provides relaxation and relief from pain
➢ Diminishes emotional component of pain
➢ Decreases anxiety
➢ Decreases fatigue
➢ Improve quality of life
Selected Complementary Methods of Pain Management

► Exercises/positioning/PT, OT
► Heat and Cold
► TENS
► Ultrasound
► Massage
► Diet/Nutrition/Herbals
► Acupuncture/Acupressure
► Music Therapy
► Therapeutic Touch
► Reflexology
► Aromatherapy

► Psychological methods
► Psychotherapy
► Imagery
► Relaxation/meditation
► Hypnosis
► Biofeedback
► Distraction
► Humor

Cancer Pain Care Settings

Inpatient
Ambulatory Care
Home

Communication

► Patient
► Nurse
► Physician
► Social worker
► Pharmacist
► Therapists
► Family

We can’t fix what we don’t know about!
Documentation

► Consent to treat with opioids
► Controlled Substance Agreements
► Prescriptions
► One pharmacy
► Physical exam and diagnostic findings
► Functionality

Make use of all the tools in your toolbox when building an App for treating cancer pain

Helpful Web Sites

► http://www.pain-topics.org/
► http://www.aspmn.org/
► http://www.ampainsoc.org/
► http://cis.ncl.nih.gov/
► http://www.cancer.org/docroot/home/index.asp
► http://www.pain.com/
► http://www.postoppain.org/frameset.htm
► http://aspi.wisc.edu/
► http://www.stoppain.org/for_professionals/compendium/
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Bibliography
