Complex Cases in Pain Management
Part II

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Disclosures

Speakers Bureau – Allergan & Pernix

Any unlabeled/unapproved uses of drugs or products referenced will be disclosed.

Objectives

- Define Pain.
- Discuss multimodal pain management.
- **Evaluate complex case-studies in pain management.**

PAIN CHARACTERISTICS

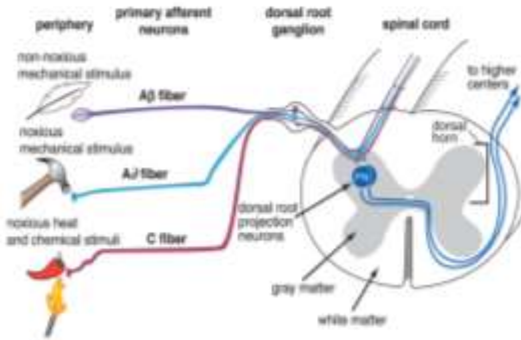
Acute	▪ Short duration ▪ Recent onset ▪ Transient ▪ Protective ▪ Known causality
Chronic (persistent)	▪ Duration >3 months ▪ Persistent or recurrent ▪ Outlasts protective benefit/detrimental ▪ Unknown causality
Breakthrough (flare)	▪ Unpredictable ▪ Fear association ▪ Multi-causality

PAIN CLASSIFICATIONS

Nociceptive Pain	▪ Normal processing of stimuli that damages normal tissues ▪ Responds to opioids
➢ Somatic	▪ Pain arises from bone, joint, muscle, skin or connective tissue ▪ Aching, throbbing ▪ Localized
➢ Visceral	▪ Organs ▪ Deep ▪ Not well localized

PAIN CLASSIFICATIONS

Neuropathic Pain	▪ Abnormal processing of sensory input by PNS or CNS ▪ Less responsive to opioids
➢ Centrally generated	▪ Deafferentation pain: injury to PNS or CNS (e.g. phantom limb) ▪ Sympathetically maintained pain: dysregulation of autonomic nervous system (e.g. CRPS)
➢ Peripherally generated	▪ Polyneuropathies (e.g. diabetic neuropathy) ▪ Mononeuropathies (e.g. nerve root compression)



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Ascending Pain Pathway

- Injury in periphery > Nociceptors
- A δ and C fibers > dorsal horn
- Ascending spinothalamic tracts > Brain
- Insula, amygdala, prefrontal cortex, anterior cingulate cortex, supplemental motor area, hypothalamus.

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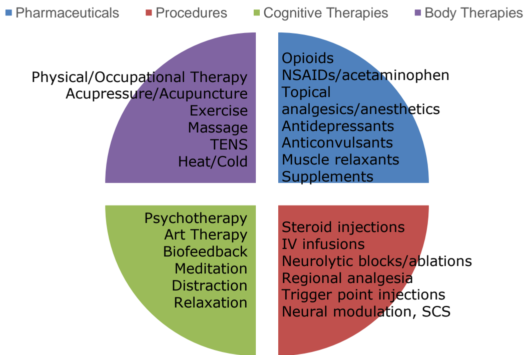
Descending Pain Pathway

- Activation of first somatosensory area > ventroposterior lateral nucleus > periaqueductal gray & raphe nucleus.
- Neurotransmitters implicated in descending pain control – serotonin, noradrenaline, endogenous opioids, GABA.
- Activation of opiate receptors @spinal cord › results in the inhibition of firing and the release of substance P, thereby blocking pain transmission.

Multimodal



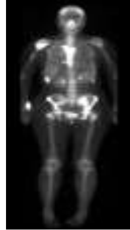
Case Studies, cont.

My English Vacation

Introducing Mrs. Smith

68-year-old female with widespread pain as a result of breast cancer that had metastasized into her lymph nodes, vertebrae, her right shoulder, and left hip.

She was referred to the pain center by her oncologist to provide palliative pain relief.

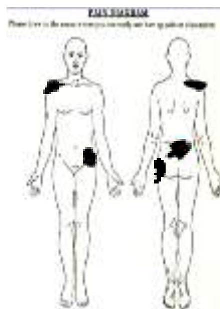


Chief complaints:

- ➢ Radicular low back pain
- ➢ Focal right shoulder & left hip pain
- ➢ Nausea, constipation, poor sleep, depression, extreme fatigue

Mrs. Smith

- ➢O – Onset
- ➢L – Location
- ➢D – Duration of each painful region
- ➢C – Characteristics
- ➢A – Aggravating factors
- ➢A – Associated symptoms
- ➢R – Relieving factors
- ➢T – Treatments, response, side effects



Mrs. Smith

History:

- ➢HTN, chronic anemia, depression, metastatic breast cancer, persistent pain.
- ➢Mastectomy 5 years ago w/lymph node dissection, bunionectomy 20 years ago.
- ➢No alcohol, no tobacco, no other drugs.
- ➢Married with one 25 year old daughter, and 2 y/o grandson.

Medications: Lisinopril 20 mg/d, fluoxetine 20 mg/d, fentanyl patch 100 mcg/48hr, daily iron, clonazepam 0.5 my bid prn, colace & MiraLax.

Diagnostics:

PET CT 2 months ago, shows metastatic lesions.

CBC = Anemia

Mrs. Smith

Exam: pulse 68 regular, 130/75

- A&Ox3, appropriately groomed, ill looking, wincing and grimacing with movement.
- CV: RRR, strong peripheral pulses.
- Lungs: Distant
- Abd: soft, non-distended
- MSK: 5/5 motor strength bilateral UE/RLE, 4/5 LLE, functional ROM all joints, pain and guarding with right shoulder movement, slightly +facet loading maneuvers lumbar spine on right, mild lumbar lordosis, +paraspinal lumbar trigger points R>L. Ambulates with a slow gait, using a walker for balance.
- Neurosensory: normal sensation throughout to light touch, no neural impingement signs identified,

Mrs. Smith

Assessment:

68 y/o females with widespread pain as a result of breast cancer that had metastasized into her lymph nodes, vertebrae, her right shoulder, and left hip. Her care is now palliative, she has less than 6 months to live.

- Her worse pain is L hip/radicular L4, mild to moderate focal low back L>R muscle spasm, focal right should pain with guarding.
- She is opioid tolerant with dose limiting side effects of worsening constipation, nausea and sedation.
- Additionally she struggles with depression, occasional anxiety, poor sleep chronic fatigue r/t anemia of chronic disease.

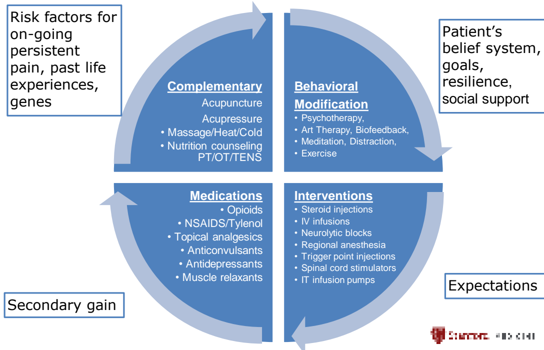
Mrs. Smith

Assessment:

68 y/o females with widespread pain as a result of breast cancer that had metastasized into her lymph nodes, vertebrae, her right shoulder, and left hip. Her care is now palliative, she has less than 6 months to live.

- Initial thoughts/concerns?
- Risk for …?
  - Failure to thrive
  - Worsening pain, depression, social isolation
  - Opioid misuse, side effects
  - Other

Multimodal Analgesia using a Biopsychosocial Approach



Mrs. Smith

Plan:

- Discuss multimodal analgesia focusing on a biopsychosocial model, address expectations.
- Discussion
  - on-going opioid use, risk stratification (monitoring), 4 A's, REMS, opioid contract, management of current suspected opioid related SE/withdrawal.
- Discussion use of non-opioid analgesics.
- Cognitive behavioral therapy/structured, focused PT/acupuncture/guided imagery.
- Interventions (e.g. TP injections for spasm)
- Additional testing?
- Referrals?

Mrs. Smith

Plan:

- Gain an understanding about her fears, concerns, expectations. Fear of dying in pain, willing to tolerate more pain to maintain lucidity, interact with family.
- Discussion
  - Focus on patient safety and appropriate use of medications. Still important to address keeping medications safe to prevent diversion and misuse. May want to consider IN naloxone.
- Non-opioid analgesics: gabapentinoid, SNRI such as venlafaxine (pain, mood, anxiety), NSAIDs/acetaminophen monitoring liver/renal. Maybe reduce Fentanyl patch b/c side effect versus switch to another long-acting, +/- immediate release versus consider IT pump

Mrs. Smith

Plan:

- Cognitive behavioral therapy/structured, focused PT (strengthening)/acupuncture/guided imagery.
- Interventions (e.g. TP injections for spasm, L4 SNRB, IT pump placement)
- Additional testing – L-spine MRI (Lumbar mass pressing on the L4 nerve root.)
- Referrals (Palliative care, social work, psychology, nutrition)

My South American Vacation

Introducing JR: Acute post-surgical pain

- JR is a 20 y/o active college freshman, otherwise healthy, suffered an ankle fracture while skate boarding.
- ORIF of ankle fracture, POD #2.
- 10/10 pain. Crying.
- 1000 mg acetaminophen qid,

oral morphine 10mg q3-4hr, IV morphine 2-4mg q6hr prn.

Medication & Substance Use History:

Occasional OTC acetaminophen or ibuprofen for various aches and pains. NKDA. Denies ETOH, tobacco, illicit drugs.

Social History:

College Freshman, lives in fraternity, plays soccer.

Has a girlfriend, good student.

Parents divorced, good relationships with family.

Pre-op Labs:
CBC = nl
CMP = nl
LFT's = nl
urine tox. screen +opiates & THC

Substance Use History

- Fraternity brother once shared his hydrocodone (Vicodin) when JR took a bad hit during a soccer game.
- JR liked the way that the hydrocodone made him feel and started using on the weekends with his friends.
- Admits to smoking marijuana after Friday night games.
- Continues to deny ETOH, or tobacco use.

- 19 y/o male POD #2 ORIF ankle fracture, who is opiate tolerant and history of polysubstance use.
- Continues to be 10/10 pain: 1gm acetaminophen qid, morphine 10mg oral q3-4hr, morphine 2-4mg IV q6hr prn.

How would you change JR's medications?

Manage his acute pain

Continue acetaminophen 1gm qid, avoid NSAIDS.

nl LFT's, reduce amount of needs opiate. NSAIDS interfere w/ bone healing, celecoxib may be ok.

Morphine ER 15mg bid, morphine 10mg q2-3hrs prn, consider starting morphine PCA @ 2-4mg q10 minutes.

Opiate tolerant. History poly-substance use & has been using oral & IV opiates over the past 24hr w/o adequate pain control or sedation. PCA will allow you to calculate how much opiate he truly needs in a 24hr period.

Manage his acute pain

Next morning you calculate: used 90mg oral morphine & 30mg IV morphine.

- Morphine IV to po 1:3
- Calculate total of 180mg MS q24hr (90+90)
- ½ total 24hr dosing in "long-acting opiate" & ½ in "immediate release": 45mg Morphine ER bid & 10-20mg MSIR q3-4hrs prn

Alt – 45mg Morphine ER tid & 10mg q3-4hr prn.

Alternative: Use of regional anesthesia

POD #4

JR is doing well on Morphine ER 45mg tid, PCA is stopped, using occasional IV MS 2-4mg for incident pain with dressing changes.

The Orthopedic Team wants to discharge JR tomorrow morning and is asking if he could come and see you in clinic.

Outcome

6 months later, JR is completing his first year of college and has decided to study chemistry/pharmacy.

Don't think it's end of his experience with orthopedic surgery!!

My Jackson Hole Vacation

Differentiate under-managed pain from addiction

- 25 y/o male hospitalized for 2 weeks with a new diagnosis of lymphoma. He is being treated with combination chemotherapy.
- Ten days after the start of chemotherapy he develops severe pain on swallowing. An upper GI endoscopy reveals herpes simplex esophagitis.
- Remote history of IVDU, reported in active recovery, clean UDS upon hospital admission.

Current regime: tramadol 50-100 mg PRN for moderate pain**,** oxycodone tabs 5-10 mg q4hrs PRN for severe pain, acetaminophen 650 mg q8hrs.

Defining terms:

- Addiction
- Tolerance
- Dependence
- Pseudo-addiction (aka under-managed pain)

The patient repeatedly asks for something for pain prior to the 4 hour dosing interval.

He is asking for parenteral dosing, and his nurse is concerned that he is exhibiting drug seeking behavior.

A pain service consult is requested:

Initial thoughts?

Concerns?

Additional information needed?

- After your assessment you recommend a change to MSIR elixir 15 mg every 4 hours around the clock.
- The Oncology NP calls you after reading your consult note and says "I appreciate your consult but I really think this patient is drug seeking and I don't feel comfortable with your recommendations. Let me think it over. I was thinking of asking a psychiatrist to see him to help with addiction management."
- Over the next several days the patient continues to complain of pain, with no new analgesic orders.

Putting yourself in the role of the Oncology NP, what is your major concern about providing stronger analgesics to this patient?

Is the patient drug seeking?

As the pain consultant, how would you educate your colleagues about the patient's needed?

Any additional options:

Opioids?

Non-opioids?

Modes of medication delivery concerns?

Non-pharmaceutical therapy options?

My New York Vacation

Weaning a non-compliant patient off of COT

Ms. Jones is a 37 y/o female who has been using hydrocodone for the past 2-3 years after suffering a job related injury. She is employed as an Attorney.

Over the past 6 months Ms. Jones has become non-compliant with your previously established opioid contract:

- Failed to present a current urine toxicology screen.
- Called in one two occasions for early refills.
- Missed her monthly clinic follow ups on at least two occasions.
- Recent PDMP shows opioid prescriptions from a medical provider not associated with your clinic.

Discussion

Now what?

- Concerns
- Thoughts
- Next steps

You ask Mr. Jones to come in for a clinic visit to discuss the issues surrounding non-compliance, and the decision is made to wean the patient off of his COT.

- Plan a safe opioid weaning schedule to reduce the risk of harm to the patient.
- How do you protect yourself against being accused of patient abandonment when stopping opioid therapy?
- Describe the risk to you if you continue to prescribe opioids to a non-compliant patient.

Thank You

Resources

- International Association for the Study of Pain: http://www.iasppain
- American Pain Society: www.americanpainsociety.org
- American Academy of Pain Medicine: www.painmed.org
- American Chronic Pain Association: http://www.theacpa.org/
- FDA Consensus: https://www.fda.gov/downloads/NewsEvents/Speeches/UCM510139.pdf
- CDC Recommendations: http://www.cdc.gov/drugoverdose/pdf/common_elements_in_guidelines_for_prescribing_opioids-20160125-a.pdf
- National Alliance for Model State Drug Laws: http://www.namsdl.org/index.cfm
- Collaborative for REMS Education: http://www.core-rems.org/tools/updates
- Institute for Clinical Systems Improvement (Opioid Prescribing Protocol): https://www.icsi.org/guidelines__more/catalog_guidelines_and_more/catalog_guidelines/catalog_pain_guidelines/opioids/