Pain Management & Resources Survivorship Forum June 2015

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What Is Pain?

 "An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage"

[Harold Merskey, 1964]

• "Pain is what the patient says it is"

What is Palliative Care?

Cancer Treatment and Palliative Care are Not Mutually Exclusive



The Bowtie Model of 21st Century *Palliative Approach* to Care



[2014]

21st Century Palliative Care

Components of care:

- Physical
 - Pain and symptom management
- Social
 - An extra layer of support for patient and family
- Psychological
 - Advance care planning, counselling
- Spiritual
 - Individualization of approach to fit with cultural and spiritual needs

21st Century Palliative Care

- Delivered by an interprofessional team
- In any location
- An <u>approach</u> rather than a place or label
- "Palliative" describes the care, <u>not</u> the person
- Does not always need a specialist
- Pain management is only one part of palliative care, but is a vital part
- Pain and loss of control are the most feared consequences of a cancer diagnosis

Cancer Pain

Many different kinds

• Cancer itself

- e.g. tumour pressing on healthy tissues

- Cancer treatment
 - e.g. chemotherapy-induced peripheral neuropathy, post surgical pain syndromes
- Coincident but related conditions
 - e.g. shingles and post-herpetic neuralgia, osteoporotic vertebral compression fractures

Cancer Pain

- Acute or chronic
- Continuous or incident
- Predictable or unpredictable
- Avoidable or unavoidable
- Unpredictable and unavoidable incident pain has most impact on quality of life
- Avoidable incident pain has most impact on function

Cancer Pain Mechanisms

- Nerves doing their job: telling you something is wrong; "nociceptive" pain
 - Usually quite responsive to NSAIDs or acetaminophen, and/or opioids
- Nerves themselves generating pain: not helpful in avoiding harm; "neuropathic" pain – More difficult to treat
- Mixture of normal and abnormal nerve function most common

Pain Patterns



Location of pain helps tell you where the problem is; dermatome map useful for central lesions....

Peripheral Nerve Map



Peripheral nerve patterns helpful for peripheral problems <u>A good physical exam is essential</u>

Referred Pain

- Sometimes pain is felt remotely from the cause
 - e.g. heart attack felt in arm or jaw
 - e.g. shoulder tip pain referred from diaphragm
- Doctors need to do a thorough exam of body parts patient might not expect
- Patients need to give the doctor a thorough and concise history

"Secondary Sensitization"

- Pain perception is not just a unidirectional process
- There are processed in the CNS which facilitate certain pathways
-and supress others
- Structural changes take place secondary to persistent neural activation
- "Wind Up" can lead to chronic pain even when the original damage has healed

"Secondary Sensitization"

- Pain in one dermatome can lead to spread of pain into other adjacent dermatomes, and to the opposite side of the body
- This is a very complex and poorly understood process
- Though there are interesting research studies going on, there have been virtually no new classes of pain medicines developed over the last 20 years
- We have however got a lot better at using what we already have

A Pain History: PQRSTU

- Place(s): where exactly does it hurt?
- Quality: what does it feel like?
- Relief: what makes it better or worse?
- Severity: how bad does it get?
- Timing: when did it start? Now when does it hurt? What is it associated with?
- Understanding: what do you think might be happening



Step1: non-opioid +/- adjuvant

- Acetaminophen (Tylenol[®])
 - Limited to 4g/day: 12 regular or 8 extra strength tabs, less if poor liver function
 - Beware of unclear labelling and inadvertent overdose!
- Ibuprofen (Advil[®], Motrin[®] etc)
 - Can cause stomach ulcers, gastritis, kidney problems, bleeding

Step 2: "weak" opioids +/- adjuvants

- A weak opioid is one which has a ceiling effect

 may actually be quite strong
- Codeine +/- acetaminophen +/- caffeine
- Oxycodone + acetaminophen (Percocet[®])
- Tramadol +/- acetaminophen
- Buprenorphine patches

Step 3 "Strong" Opioids

- Morphine.....
- Hydromorphone...... Slow and fast release oral
- Oxycodone.....
- Fentanyl Transdermal Patch
- Methadone..... Liquid or pills

Special Drugs

- Sufentanil... ultra-fast under the tongue
- Tapentadol... codeine "plus"

Side Effects

Common:

- Constipation
- Nausea in ~1 in 3
- Sedation

but....

- Constipation usually easily addressed with regular laxatives
- Nausea and sedation resolve after a few days in most patients

Relative Merits/Evils of Opioids

- Morphine
 - Cheap
 - Usually effective for pain
 - Active metabolites which can accumulate, especially in kidney failure
 - Allergy can occur

Hydromorphone

- Less active metabolites so often tolerated better than morphine
- More soluble than morphine in high concentrations of injectable form
- Toxic metabolite can accumulate in high doses
- Not covered by Pharmacare in long-acting form, except on palliative drug benefits program or by special authorization

Oxycodone

- May be more effective than morphine/hydromorphone/fentanyl in neuropathic pain
- Least sedating of all opioids
- Can cause agitation
- Long acting form (OxyNEO) not covered by Pharmacare except on palliative benefits
- Short acting pills are quite large

Fentanyl

- Drug absorbed even when not able to take oral meds
- Less constipating than oral opioids
- No active metabolites, so reduced risk of toxicity and accumulation
- Very stable blood levels over 3 days
- Easy to administer
- Sometimes doesn't work (multiple opioid receptors, different opioids work through different receptor ranges)
- Tolerance appears to occur quickly in some people

Methadone

- Less constipating than other oral opioids
- More effective in neuropathic pain (anecdotal but wellestablished)
- Least likely to lead to tolerance
- No active metabolites, so least likely to cause toxicity
- Can accumulate over a few days: needs to be started slowly and carefully adjusted to avoid accumulation
- Can <u>very rarely</u> cause cardiac arrhythmia via QT prolongation
- Need special license to prescribe

Rapid Onset Transmucosal Opioids

- Sufentanil or fentanyl liquid
- Fentanyl tablets
- Rapid onset within 10-15mins, last ~1-2hrs, as compared with standard oral preparations ~30 mins for effect, last for ~4hrs
- Good for pain which comes and goes quickly

Buprenorphine

- Flesh-coloured transdermal patch
- Week-long application
- Effects similar to methadone
- Thought to have less respiratory depression for those at high risk (COPD, sleep apnea)
- Not covered by Pharmacare
- Only available in Canada in low doses

Tapentadol [Nucynta]

- A stronger form of Tramadol: like morphine plus an adjuvant effect
- Not covered by Pharmacare
- Unclear what role is compared with other available opioids

"Adjuvant" Analgesics

Medicines which can help pain by non-opioid means

Response rates vary, unpredictable

- NSAIDS, steroids
- Tricyclics (neuropathic pain)
- Anticonvulsants (neuropathic pain)
- Cannabinoids
- Lidocaine infusions
- Anti-spasm agents (visceral pain)
- Bisphosphonates (bone pain)

Step 4: procedures

- Nerve blocks
- Tumour ablation by heating (RFA) or freezing (cryo)
- Cementoplasty
- Spinal infusions
- Spinal cord stimulation

Vertebroplasty



Vertebroplasty



Acetabuloplasty



Implanted Intrathecal Pump





Accessing the Spinal Fluid Space



Inserting the Catheter



Threading the Tube Around the Front



Inserting the Pump



Spinal Cord Stimulator





Less Pain Than Those With Active Cancer, But Still 1 in 3



Common Post-Cancer Pain Syndromes

- Chemotherapy-induced peripheral neuropathy
- Post surgical pain
- Post radiation pain
- Chemotherapy-induced arthralgia
- Post herpetic neuralgia
- Pain from skeletal collapse
- Others

Interventions

- All interventions for cancer pain can also be useful for pain in people in survivorship phase
- Long-term use of opioids is particularly troublesome becaue of tolerance and hyperalgesia
- Aim to wean off opioids as soon as possible
- Or switch to opioid least likely to lead to impede recovery (i.e. methadone)

Resources

- Sorry, but there's not a lot out there
 - Family doctors
 - Pain clinics: St Paul's, Surrey, a few private facilities
 - A few "pain specialists": soon to become a subspecialty of anesthesia, so may be easier to find in future
- BCCA PSMPC clinics can transition patients to GPs only when GPs are willing and able to provide appropriate care

Other Resources



Information and networking for patients

Place for patients to go to get help.

Not all covered by MSP. Approx. 2 months wait after completion of initial questionnaire

Summary

- Cancer pain is very complicated
- There are lots of choices in treatment
- Different approaches can be combined
- Most cancer pain can be relieved
- Specialist pain management support is <u>not</u> widely available in survivorship phase of illness
- This needs to change