PAIN

Nocturnal – caused by nerve stimulation
Neuropathic – caused by nerve damage
Incident – predictable, caused by specific event (e.g. movement)

Remember that an individual may have a number of pains. Assess the quality of each pain. What does it feel like? Assess the severity of each pain. Use a numerical score (0-10) or a Visual Analog Scale.

OPIOIDS

APPROXIMATE ORAL EQUIVALENCIES:

Morphine

10 mg

Hydromorphone

2 mg

Codeine

100 mg

Oxycodone

5 – 7.5 mg

SUBCUTANEOUS OR INTRAVENOUS DOSES:

Divide the PO dose by 2.

(e.g. Morphine 10 mg PO = Morphine 5 mg IV)

TRANSDERMAL DOSE CONVERSIONS:

24 hr PO Morphine (mg) to Fentanyl T/D (mcg/hr)

60-134 mg/day = 25 mcg/hr  315-404 mg/day = 100 mcg/hr

155-224 mg/day = 50 mcg/hr  405-494 mg/day = 125 mcg/hr

225-314 mg/day = 75 mcg/hr  495-584 mg/day = 150 mcg/hr

*For high doses, check dose conversion charts

The correct dose is the dose that keeps the individual comfortable.

The best pain relief is achieved by giving the analgesic on a regular, rather than a prn basis.

Immediate release opioids PO/SC/IV should be dosed q4hourly

Controlled release opioids should usually be dosed q12hourly

Transdermal Fentanyl should be dosed q24hours

Remember a dose for breakthrough pain:

aim for 10% of daily dose, given q1hr PO or q30min SC prn

For Fentanyl T/D, aim for Morphine 10 mg PO (5 mg SC)

or Hydromorphone 2 mg PO (1 mg SC) per every 25 mg of patch

(e.g. Fentanyl 75 mcg/hr: 6 mg Hydromorphone q1h)

When changing from one opioid to another for suspected development of tolerance, reduce the calculated dose by 30%; increase if necessary.

DEALING WITH COMMON OPIOID SIDE EFFECTS

Constipation: very frequent; all patients on opioids should be warned of this side effect and usually started on stool softeners (e.g. docusate) and laxatives (e.g. senna).

Nausea / Vomiting: initially occurs in 2/3 of opioid users, but tolerance develops in more than one half of them; Meclizine and Haloperidol are the most effective antiemetics for this and can often be tapered or stopped after a short time.

Sedation: may occur on initiation or dose escalation; tolerance usually develops to mild sedation; if persists, lower the dose or change to a different opioid.

Dry mouth: a common side effect; encourage PO fluid intake and good mouth care.

Neurotoxicities: mild hallucinations are common; for confusion, delirium and myoclonus, consider other causes as well as changing the opioid.

Respiratory depression: generally only a problem with excessive doses; reduce the dose of opioid; in severe cases give small doses of Naloxone to partially reverse the opioid effect.

If any opioid-related side effects are persistent and bothersome, consider changing the opioid.

COMMON MEDICATIONS FOR NEUROPATHIC PAIN

Opioids may be very helpful, alone or as an adjunct

TCA, e.g. Amitriptyline 10.75 mg hs - start low, increase slowly

Tegretol - check CBC, LFT's monthly; do not exceed therapeutic level

Gabapentin 300-3000 mg/day - start low, increase slowly

Pregabalin 50-100 mg tid

Steroids – e.g. Dexamethasone up to 16 mg per day

Baclofen 5 mg PO qid - start low, increase slowly

Cannabinoids – e.g. nabilone, dronabinol – start low, increase slowly

Anticonvulsants may be more effective for "shooting" pains. For "burning" or "tingling" pains, TCA’s may be more helpful. If the antidepressant or anticonvulsant is ineffective alone at maximum tolerated doses, add the other.

INCIDENT PAIN

Fentanyl IV solution given SL

Start with 12.5–25 mcg SL, 5 minutes prior to the incident

Increase as needed by 25 mcg to maximum 100 mcg pre-incident

Sufentanil may be useful in more severe pain, as it is 5 times as potent as Fentanyl.
NAUSEA / VOMITING

NON-PHARMACOLOGIC MEASURES
- Calm reassuring environment
- Avoid exposure to foods which may precipitate nausea
- Transfer the cooking role / cooking location
- Good, frequent mouth care
- Frequent small snacks
- Flexibility in food availability
- Review drugs – diet 0 if possible
- Change the opioid
- Complementary therapies

PHARMACOLOGIC OPTIONS include:
- Promethazine
- Lorazepam
- Dexamethasone
- Ondansetron
- Scopolamine
- Metoclopramide
- Prochlorperazine
- Domperidone
- Haloperidol

PHARMACOLOGIC MEASURES
- Topiramate: 1-4 mg/day in divided doses, PO/SC
- central Dopamine antagonist
- – excellent for opioid / chemical / metabolic nausea
- – extrapyramidal side effects, but unusual at low doses
- Metoclopramide: 10-20 mg q6h PO/SC/W
- peripheral and central Dopamine antagonist
- – useful for gastric stasis / reflux
- – s/c: extrapyramidal, prolonged half-life in renal failure; colic in GI obstruction
- Domperidone: 10-30 mg q4H PO
- – peripheral Dopamine antagonist
- – useful for gastric stasis / reflux
- Prochlorperazine: 10 mg q4H; PO/PR/IV
- – peripheral and central Dopamine antagonist
- – extrapyramidal side effects, dryness
- Dimenhydrinate: 25-50 mg PO/IV q4H; 100 mg PR q6h
- – central Histamine and Acetylcholine antagonist
- – dryness is common
- Promethazine: 25 mg PO/PR q4H; 12.5-25 mg IV q4h
- – central Histamine and Acetylcholine antagonist
- Granisetron – 500 mcg T/D patch – 1-3 patches q 72 hours
- – central and peripheral Acetylcholine antagonist
- Ondansetron – 8 mg q6h PO/IV
- – central and peripheral Acetylcholine antagonist
- Pranlansetron – 1 mg q12H PO/IV
- – central and peripheral Acetylcholine antagonist
- most useful post chemotherapy, abdominal radiotherapy and post-operatively
- – s/c: headache, constipation, diarrhoea, dryness
- Oxazepam: 4-8 mg per day PO/SC
- – central and peripheral effects
- Lorazepam – 1-2 mg q4H prn PO/SL/SC
- – flex 0 for antiemetic properties, but reduces anxiety, anticipatory nausea

BOWEL OBSTRUCTION

PHARMACOLOGIC OPTIONS: 5-HT4 agonists, 5-HT3 antagonists, blockers of colonic motility and prostaglandin synthesis

PHARMACOLOGIC MEASURES
- Neostigmine 1 mg IV q4H prn
- Topical Castor Oil: 10 ml rectally q6H
- Hyoscine: 0.4 mg SC q3h prn

COMMUNICATION HINTS

- Prior to the visit, consider your own feelings
- Anticipate questions you may be asked
- Assess privacy
- Make sure the patient and you are comfortable.
- Find out what they know, and what they want to know
- Use language they can understand.
- Give any bad news sensitively.
- Be truthful.
- Acknowledge their feelings.
- Ask them to summarize what you told them.
- Allow time for questions.
- Provide psychological support.
- Set a time for the next visit.

Examples of Potentially Useful Questions:
- What concerns you most about your illness?
- What has been most difficult for you?
- What are your hopes, expectations and fears for the future?
- Is faith (spirituality, religion) important to you in this illness?
- Is there someone you can talk to about spiritual issues?
- What do you still want to accomplish during your life?
- What might be left undone if you were to die today?
- What do you want others to remember about you?

**REMEMBER TOTAL SUFFERING**

- Pain, Other Physical Symptoms, Psychological Issues, Social Issues, Cultural Issues, Spiritual Issues all contribute to Total Suffering

Prepared by: Cornelius Woelk MD, CCFP, FCFP
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Please note: Medicine is a constantly changing science. End of Life Care is frequently complex. Medications and doses suggested herein should be used in conjunction with other resources (e.g. product information, consultation), especially if their use is new or infrequent.

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