

## Palliative Care Tip – Issue#5:

### **NAUSEA AND VOMITING IN ADVANCED CANCER/May 14, 2018**

#### **Step 1. Consider etiologies (often multifactorial)**

- GI: Oral/esophageal candidiasis; esophagitis/gastritis; gastroparesis; gastric outlet obstruction; ileus; bowel obstruction; constipation
- Metabolic: Hypercalcemia; hyponatremia; renal failure; liver failure
- Drugs and toxins: Opioids; antidepressants; NSAIDs; antibiotics; infection
- CNS: Brain metastases; leptomeningeal metastases; vestibular dysfunction; anxiety
- Cancer treatment: Chemotherapy (especially cisplatin, cyclophosphamide, doxorubicin), radiotherapy

#### **Step 2. Determine which mechanisms and receptors are involved**

- Chemoreceptor trigger zone (CTZ)(drugs, toxins, metabolic): dopamine, serotonin, neurokinin
- Gastrointestinal tract: dopamine, serotonin
- Brain cortex: GABA, acetylcholine, cannabinoid
- Vomiting centre: acetylcholine, dopamine, neurokinin
- Vestibular apparatus: histamine, acetylcholine

#### **Step 3. Target management to etiologies and mechanisms**

##### a) General principles

- Identify and treat underlying reversible causes, depending on goals of care & patient condition (see Tips on Constipation and Bowel Obstruction).
- Consider using sc route for medications and hydration if symptom affects ability to take by mouth.
- Select an antiemetic based on underlying mechanism (note that evidence for most antiemetics is limited in the non-cancer treatment setting<sup>2</sup>)
- Consider lower doses of antiemetics in patients who are elderly or have organ failure
- Taper/discontinue antiemetics if nausea and vomiting improve

##### b) Nausea and vomiting related to chemotherapy and radiotherapy

- See Alberta Cancer Guideline ([link](#)) and American Society of Clinical Oncology guideline<sup>1</sup>

##### c) Nausea and vomiting not related to cancer treatment

- 1<sup>st</sup> line
  - Often an antidopaminergic agent, as CTZ and GI tract are often implicated
  - Metoclopramide: 10 mg po/subcut qid (best evidence; watch for extrapyramidal side effects, potential for QT prolongation)
  - Domperidone: 10 mg po tid (does not cross blood brain barrier - lower risk of EPS; but higher potential for QT prolongation esp. combined with CYP3A4 inhibitors)
  - Haloperidol: 0.5-1.0 mg subcut bid (preferred in high-grade GI tract obstruction as no prokinetic effect, dose dependent QT prolongation)
- 2<sup>nd</sup> line
  - Methotrimeprazine (dopamine, acetylcholine): 2.5-5 mg po/subcut bid
  - Olanzapine (dopamine, serotonin, histamine): 2.5 mg po/sublingual bid
  - Ondansetron (serotonin): 8 mg po/subcut bid
  - Dimenhydrinate (histamine): 25-50 mg po/subcut qid
  - Scopolamine hydrobromide (acetylcholine): 1.5 mg transdermal q3d
  - Nabilone (cannabinoid): 0.5-1 mg po bid

EDMONTON ZONE – PALLIATIVE AND END OF LIFE CARE

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- Dexamethasone (anti-inflammatory): 4 mg po/subcut bid → avoid long-term use

References:

1. *Alberta Cancer Guideline (link to be placed)*
2. Hesketh PJ et al. [Antiemetics: American Society of Clinical Oncology Clinical Practice Guideline Update](#). J Clin Oncol 2017; 35:3240-3261.
3. Walsh D et al. [2016 Updated MASCC/ESMO consensus recommendations: Management of nausea and vomiting in advanced cancer](#). Support Care Cancer 2017; 25:333-340.

**REMEMBER: For referrals, questions, or telephone consultations call 496-1300 weekdays and weekends.**

Palliative Care Tips are now available on our Website: [www.palliative.org](http://www.palliative.org)