Nausea and Vomiting

Principles and Practice in End of Life Care

November 2018

Overview

- Aims and Objectives
- Why is managing nausea and vomiting important?
- Definitions
- Causes
- Interventions – pharmacological and non-pharmacological
- Case Studies
- Summary

What do you want from this session?

Shout out!

Aim and Objectives

Aim

- To increase your knowledge and confidence in the causes and treatment options for nausea and vomiting in palliative care patients

Objectives

- Insight into prevalence compared with other symptoms
- Understand the differences between different terms relating to nausea and vomiting
- Identify potential causes
- Identify management options
- Practical applications

Why is it important?

- A common and debilitating symptom
- Affects up to 70% of patients with advanced cancer
- Multiple causes, patterns and treatments
- Usually a single cause, but may require multiple, simultaneous interventions
- Ranked as a highly distressing symptom – often more so than pain or dyspnoea

What is Nausea?

Unpleasant feeling of need to vomit accompanied by autonomic symptoms (pallor, cold sweat, salivation, tachycardia, diarrhoea)

What is vomiting?

The forceful propulsion of gastric contents through the mouth

Useful Terms

- **Retching** is:

A rhythmic, laboured spasmodic movement of the diaphragm and abdominal muscles

- **Regurgitation** is:

An effortless expulsion of foodstuffs

Impact

- Fear of losing control
- Fear of death
- Fatigued
- Clammy / sweaty
- Tachycardic
- Everything aches
- Pain
- Thirst
- Loss of dignity
- Want to die
- Isolated
- Embarrassed
- Exhausted
- Weak
- Debilitating
- Repulsed
- Anxious
- Not wanting to eat / drink

Causes of Nausea and Vomiting

- Drugs
- Radiotherapy
- Liver failure
- Gastric Stasis
- Bowel Obstruction
- Constipation
- Raised intracranial pressure
- Cerebellar metastases
- Anxiety
- Cancer
- Gastric irritation
- Constipation
- Oral thrush
- Pain
- Biochemical imbalance
- Hypercalcaemia
- Renal Failure
- Anticipation

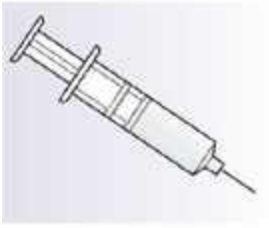
Physiological Aspects

- Primitive defence mechanism against ingested toxins
- Mediated via higher centres - sight, smell, taste (learned response)
- Receptors in upper gut
- Chemoreceptor trigger zone (floor of 4th ventricle)
- Vestibular system
- Controlled by integrated vomiting centre in medulla
- Stimulated by input from various pathways
- Specific neurotransmitters are involved
- Specific drugs act on specific receptors

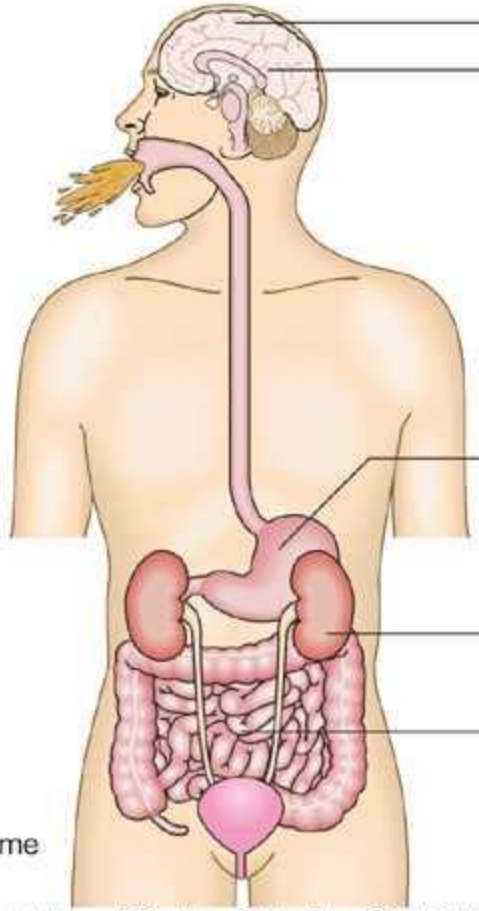
Alcoholism

Drugs
- NSAIDs
- Opiates
- Digoxin
- Antibiotics
- Cytotoxins

Infections
- Hepatitis
- Gastroenteritis
- Urinary tract infection



Metabolic
- Diabetic ketoacidosis
- Addison's disease
- Cyclical vomiting syndrome



Psychogenic

CNS disorders
- Vestibular neuronitis
- Migraine
- Raised intracranial pressure
- Meningitis

Gastroduodenal
- Peptic ulcer disease
- Gastric cancer
- Gastroparesis

Uraemia

The acute abdomen
- Appendicitis
- Cholecystitis
- Pancreatitis
- Intestinal obstruction

Colledge et al: Davidson's Principles and Practice of Medicine, 21st Edition

Assessment is key!

• **O**nset	When did it begin, duration, frequency
• **P**rovoking / Palliating	Triggers, what makes it better / worse
• **Q**uality	What does it feel like , describe it
• **R**egion / Radiation	Nausea with / without vomiting
• **S**everity	Intensity 1 – 10, other symptoms
• **T**reatment	Medications past & present ? effect
• **U**nderstanding / Impact	Cause ? Affects on you and family
• **V**alues	Goals / acceptable level, feelings

Visual Assessment

- **Timing**
  - Immediately after food / fluid= ? Gastric outflow obstruction or oesophageal obstruction
  - Every few days = ? Intestinal obstruction
  - Early morning = ? Brain metastases
  - Stimulus
- **Volume**
  - Small, frequent = ? Regurgitation, not vomiting
  - Large, every few days = ?intestinal obstruction
- **Colour**
  - White and frothy ? Oesophageal obstruction or lung tumour pressure on oesophagus
  - Yellow = bile present = not total gastric outflow obstruction
  - Green/ dark = ? Probably intestinal obstruction
  - Coffee grounds = gastric bleed

Non Pharmacological Interventions

- Accessible bowl and tissues
- Sips of fluid / crushed ice
- Mouthwash / clean teeth
- Tepid flannel
- Fresh air / fan therapy
- Change clothes and bedlinen
- Ginger / small snacks
- Someone else to cook
- Rest before meals
- A walk before meals
- Self hypnosis
- Systematic desensitization
- Acupuncture / acupressure
- Music therapy
- Someone being there
- Reassurance
- Accessible bowl and tissues
- Alert someone
- Privacy
- Remove / reduce odours and other nausea stimulants
- Sea bands
- Breathing and relaxation
- Distraction / diversion
- Progressive muscle relaxation
- Biofeedback
- Guided imagery

Pharmacological Interventions

- Reduce / stop drugs which may be cause
- Choose anti – emetic(s) which are appropriate for the cause of nausea identified
- Consider other medication which may help
- Prescribe oral and stat injection route
- Consider syringe driver if severe
- Review

Choice of anti-emetic

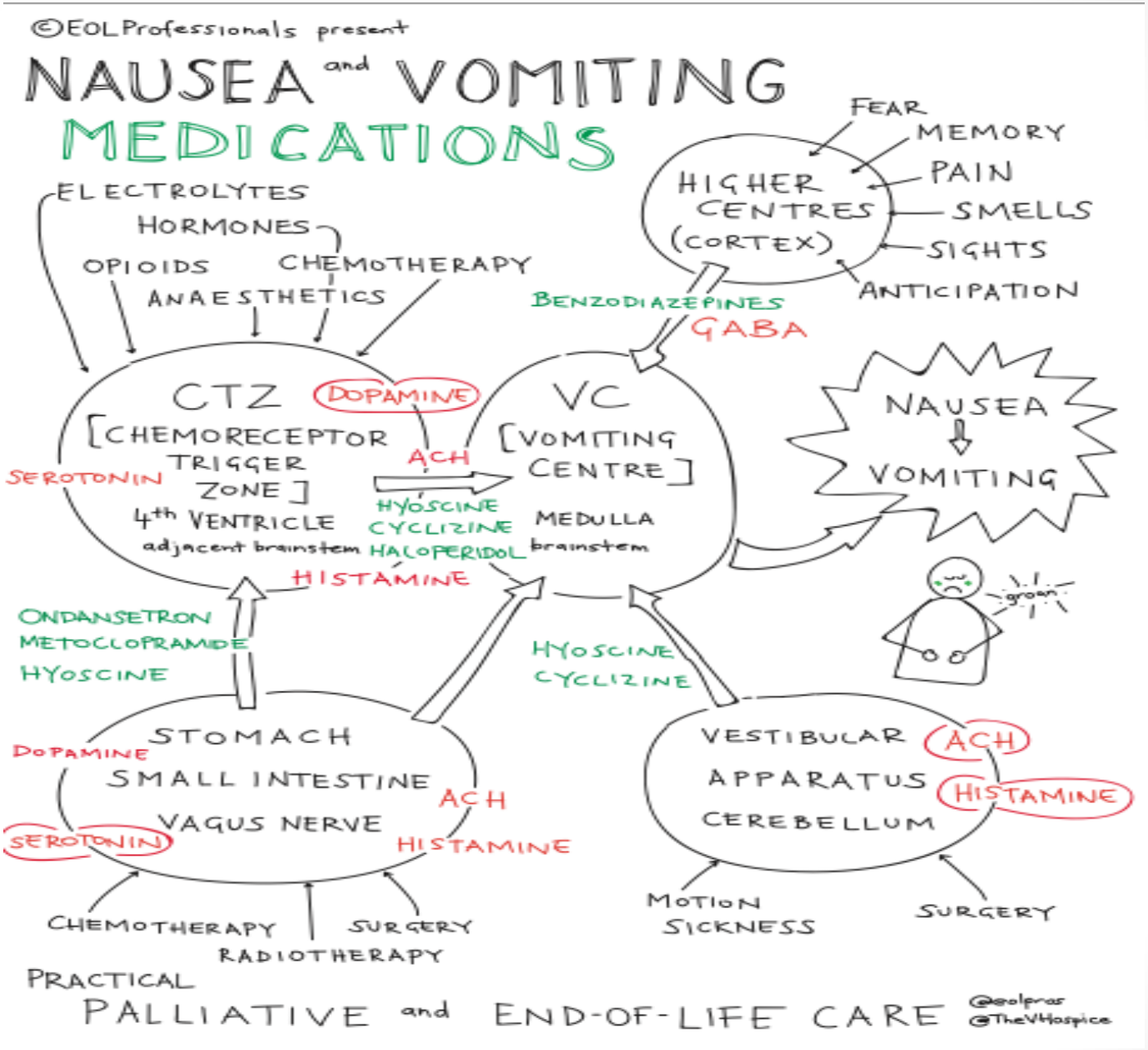
- Depends on the cause
- Knowledge of receptors and neural pathways is helpful
- Change anti-emetic if no improvement after 24/48hrs

The Basics

- **IF A PATIENT IS NAUSEATED -** prescribe a regular anti-emetic P.O. if there is no vomiting, malabsorption or severe gastric stasis

- **IF A PATIENT IS VOMITING -** give an anti-emetic by injection. Oral agents could be used after this

- **IF VOMITING PERSISTS -** a syringe driver should be started to avoid the need for repeated injections


©EOLProfessionals present
NAUSEA and VOMITING
MEDICATIONS
ELECTROLYTES
HORMONES
OPIOIDS
CHEMOTHERAPY
ANAESTHETICS
FEAR
MEMORY
PAIN
HIGHER CENTRES (CORTEX)
SMELLS
SIGHTS
ANTICIPATION
BENZODIAZEPINES
GABA
CTZ [CHEMORECEPTOR TRIGGER ZONE]
4th VENTRICLE
adjacent brainstem
DOPAMINE
SEROTONIN
ACH
HYOSCINE
CYCLIZINE
HALOPERIDOL
HISTAMINE
VC [VOMITING CENTRE]
MEDULLA
brainstem
NAUSEA
VOMITING
groan
ONDANSETRON
METOCLOPRAMIDE
HYOSCINE
HYOSCINE
CYCLIZINE
STOMACH
SMALL INTESTINE
VAGUS NERVE
DOPAMINE
SEROTONIN
ACH
HISTAMINE
VESTIBULAR APPARATUS
CEREBELLUM
ACH
HISTAMINE
CHEMOTHERAPY
RADIOTHERAPY
SURGERY
MOTION SICKNESS
SURGERY
PRACTICAL PALLIATIVE and END-OF-LIFE CARE
@eolpros
@TheVHospice

Other medications

- Steroids- Dexamethasone 4 – 16mg daily for ↑ICP / Intestinal Obstruction
- Antibiotics
- Antifungals (ie nystatin, fluconazole)
- Gastric protection (PPI drugs) ie lanzoprazole, omeprazole
- Oral aperients
- Anti anxiolytics ie lorazepam 500mcg SL
- Octreotide 500mcg / 24 hours
- Biphosphonates
- Cannibanoids

Alternative Interventions

NG Tube

- Is an option
- Often avoided in palliative care
- May improve wellbeing and quality of life for some patients
- Can be insitu until patient is approaching death

SC/IV Fluids

- If symptoms remain uncontrolled by other means
- May need to be considered
- Severe dehydration
- Correct electrolyte imbalance

Case Study One

52 year old female working as a part-time teaching assistant. Lives with husband who works as a self employed carpenter and two children aged 17 and 15 who are both still in full time education.

Diagnosed with bowel cancer 2 years ago, presented with bowel obstruction, had an emergency bowel resection and formation of colostomy. Post op monitoring demonstrates multiple peritoneal mets and there are no further treatment options. Her wish is to continue to work and manage the household for as long as she can.

She is now experiencing symptoms of nausea related to smells. Preparing/cooking food and when changing her stoma are particularly difficult times.

What do you think is the cause of the nausea?

What could you suggest to try and manage it?

Case Study Two

Mrs A has breast CA. She has just started morphine for pain control. She phones to say she is nauseous most of the time and has even vomited twice today. She sounds extremely anxious about things.

What could be causing the nausea?

How would you try and manage this?

Summary

- Unpleasant symptom
- Multiple cause
- Not everyone needs drugs!
- Multiprofessional approach
- Seek advice

Questions?

Thank you