

MANAGEMENT OF NAUSEA & VOMITING



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Objective

- Symptom evaluation to determine cause
- Understanding of symptom pathophysiology



- Rational antiemetic prescription



Outline

- Background
- Management
 - Evaluation to identify cause
 - Treatment of reversible causes
 - Non-pharmacological management
 - Pharmacological management
- Clinical cases

Definitions

- Nausea
 - An unpleasant feeling of the need to vomit, often accompanied by symptoms such as salivation and cold sweating
- Vomiting
 - Forceful expulsion of gastric contents through the mouth

Why important?

- Common
- Unpleasant



Prevalence

- Nausea
 - 30-70% advanced cancer
 - 25-30% non-malignant disease in last year of life
- Vomiting
 - 20-45% advanced cancer
 - 30% during first week of opioid treatment

Consequences

- Physical effects
 - Dehydration, malnutrition, anorexia, weight loss, insomnia
- Psychological effects
 - Threat to survival and self image, anxiety, depression, anger
- Social effects
 - Inability to prepare food, eat with others, do house chores, curtailment of leisure activities

Management Objectives

- Evaluation to identify cause(s)
- Treatment of reversible causes
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Evaluation

The key to successful symptom management is identification of the underlying cause(s)

- Treat reversible causes
- Rational antiemetic prescription

Evaluation

- Disease
 - Bowel obstruction, constipation, anxiety, pain, raised intracranial pressure, hypercalcaemia
- Treatment
 - Chemo/radiotherapy, opioids, SSRIs
- Concurrent problems
 - Infection, peptic ulcer disease, renal failure

Evaluation

- Take detailed nausea and vomiting history
 - Evaluate each symptom separately
 - Relative severity of nausea vs. vomiting
 - Relief/persistence of nausea after vomiting
 - Timing of vomiting and symptom triggers
 - Frequency of vomiting and diurnal variation
 - Content and volume of vomitus
 - Distinguish vomiting from expectoration and regurgitation
 - Associated symptoms such as morning headaches

Evaluation: clinical pictures

1) Chemical/metabolic

- Severe persistent nausea
- Little relief from vomiting
- Small volume vomitus and/or retching

2) Bowel obstruction

- Intermittent/mild nausea
- Nausea often relieved by vomiting
- Large volume vomitus
- Upper GI: early satiety, vomit after meal, undigested food
- Lower GI: faeculent vomitus, associated symptoms eg colic

Evaluation: clinical pictures

3) Raised intracranial pressure

- Diurnal variation, worse in the morning
- Associated headache

4) Movement-related

- Precipitated by movement

Evaluation: identify causes

1) Chemical/metabolic

- Drugs eg opioids, SSRIs
- Chemotherapy
- Hypercalcaemia
- Uraemia

2) Bowel obstruction

- Direct tumour effect
- Ascites
- Constipation
- Gastric stasis from hepatomegaly, drugs etc

Evaluation: identify causes

3) Raised intracranial pressure

- Intracranial malignancy
- Cranial radiotherapy

4) Movement-related

- Vestibular disease
- Transport

Management Objectives

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Reversible Causes

- Drugs
- Hypercalcaemia
- Anxiety
- Constipation
- Raised intracranial pressure
- Tense ascites
- Severe pain
- Cough

*Always correct
these first!*

Management Objectives

- Evaluation to identify cause(s)
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Non-pharmacological measures

- Relaxation
- Calm, reassuring environment
- Small snacks, bland food
- Avoid odours
- Attention to food preparation
- Mouth care
- Acupuncture and acupressure (P6)
- NG / PEG tubes
- Surgery/stents

Management Objectives

- Evaluation to identify cause(s)
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- Pharmacological management

Pharmacological management

- First line antiemetics
 - Metoclopramide
 - Cyclizine
 - Haloperidol
- Second line antiemetics
 - Levomepromazine
 - Granisetron/ondansetron
- Miscellaneous
 - Hyoscine butylbromide
 - Octreotide
 - Dexamethasone
 - Benzodiazepines

Pharmacological management

- First line antiemetics

- Metoclopramide
- Cyclizine
- Haloperidol

- Second line antiemetics

- Levomepromazine
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- Miscellaneous

- Hyoscine butylbromide
- Octreotide
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Pharmacological management

1) Chemical/metabolic

- a) Haloperidol
- b) Granisetron/ondansetron

2) Bowel obstruction

- a) Metoclopramide (if no colic)
Hyoscine butylbromide (if colic)
- b) Octreotide
- c) Dexamethasone
- d) Granisetron/ondansetron

Pharmacological management

3) Raised intracranial pressure

- a) Cyclizine
- b) Dexamethasone

4) Movement-related

Cyclizine

Pharmacological management

3) Raised intracranial pressure

- a) Cyclizine
- b) Dexamethasone

4) Movement-related

Cyclizine

5) Multiple causes or unknown cause

Levomepromazine

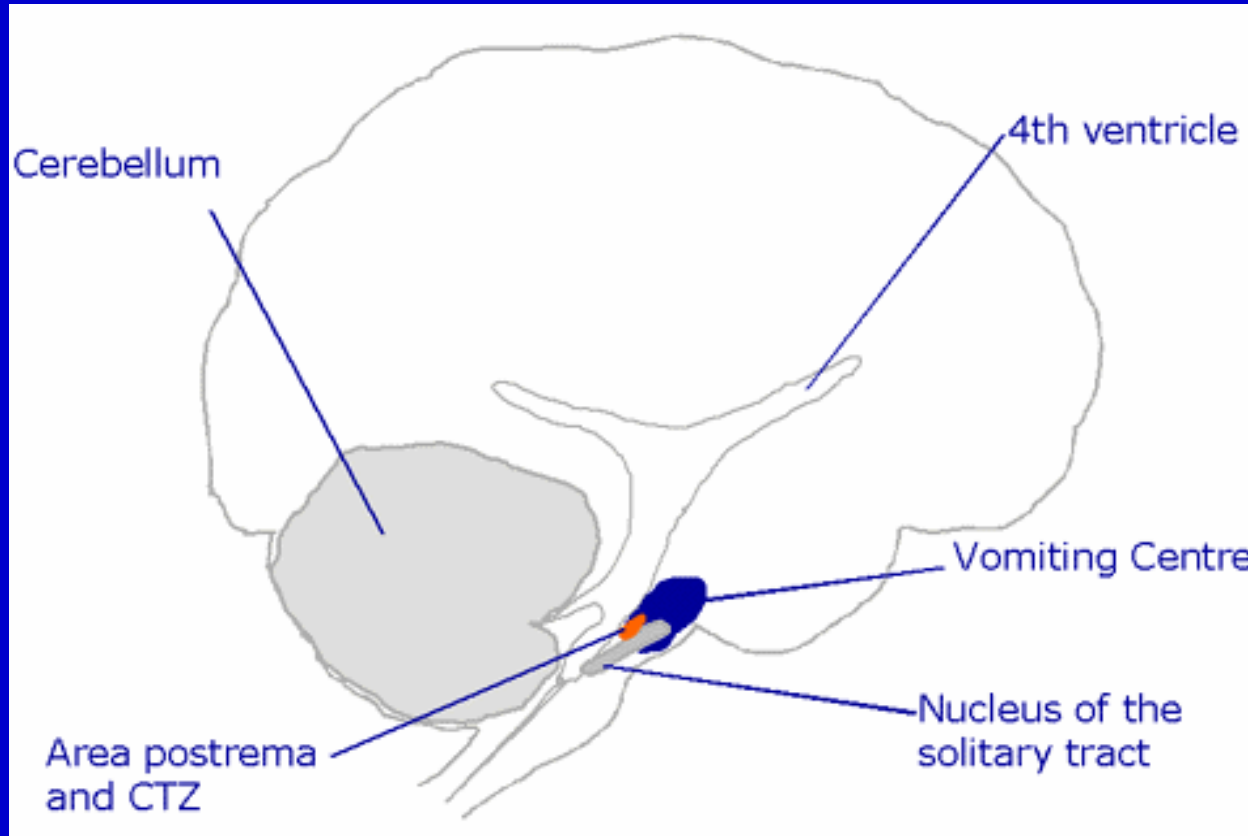
Objective

- Symptom evaluation to determine cause
- Understanding of symptom pathophysiology

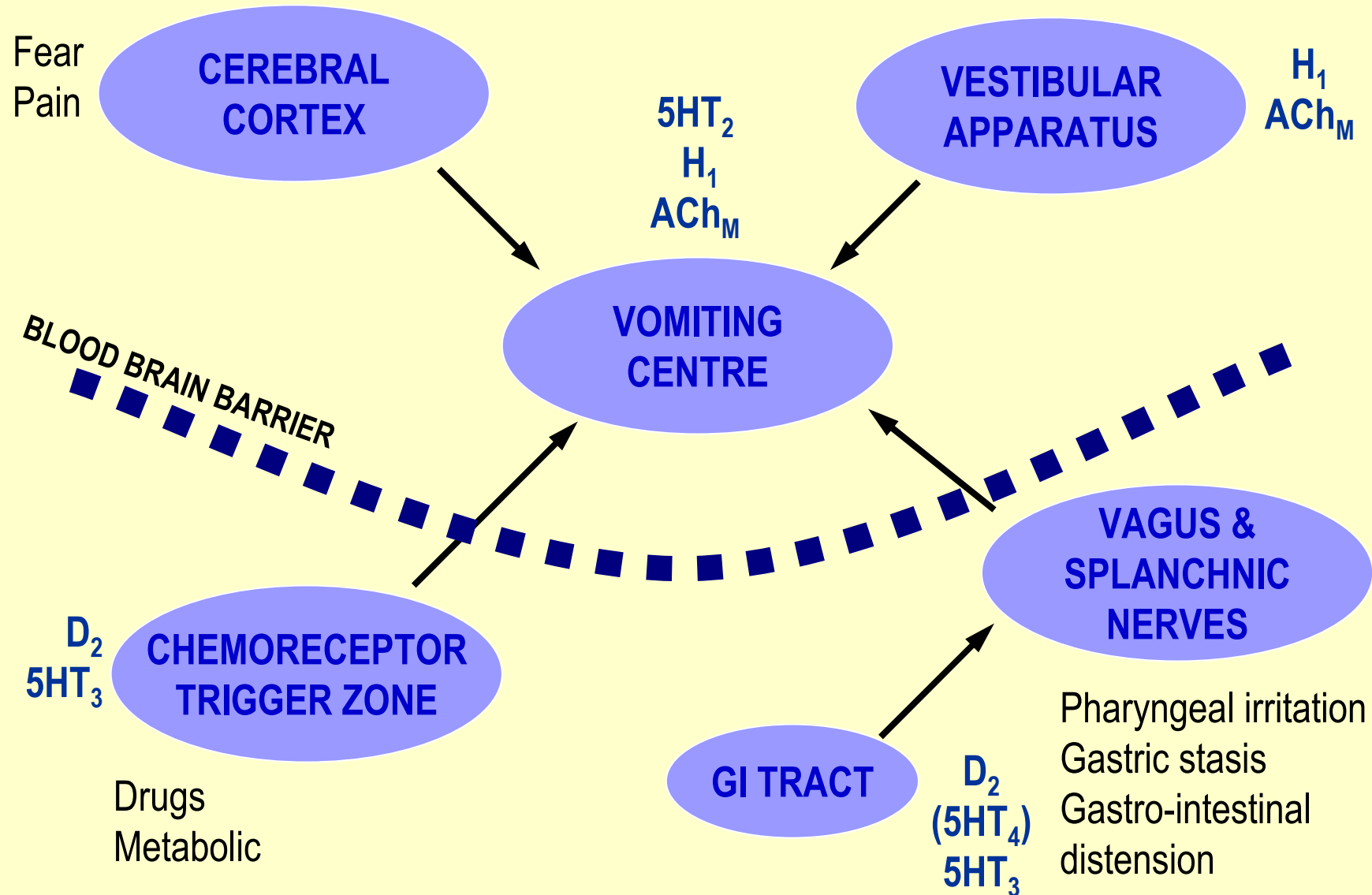


- Rational antiemetic prescription

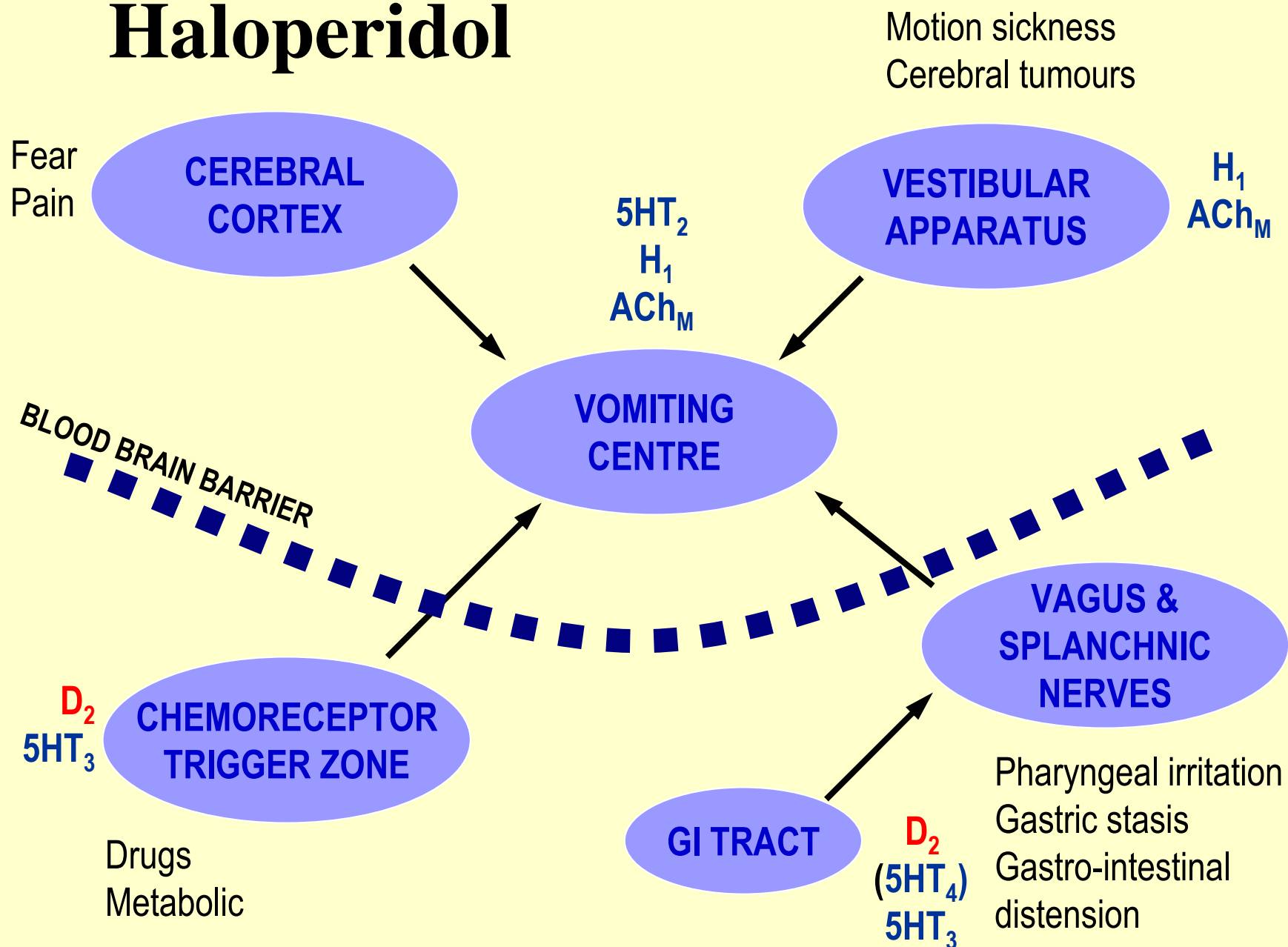
Neuroanatomy



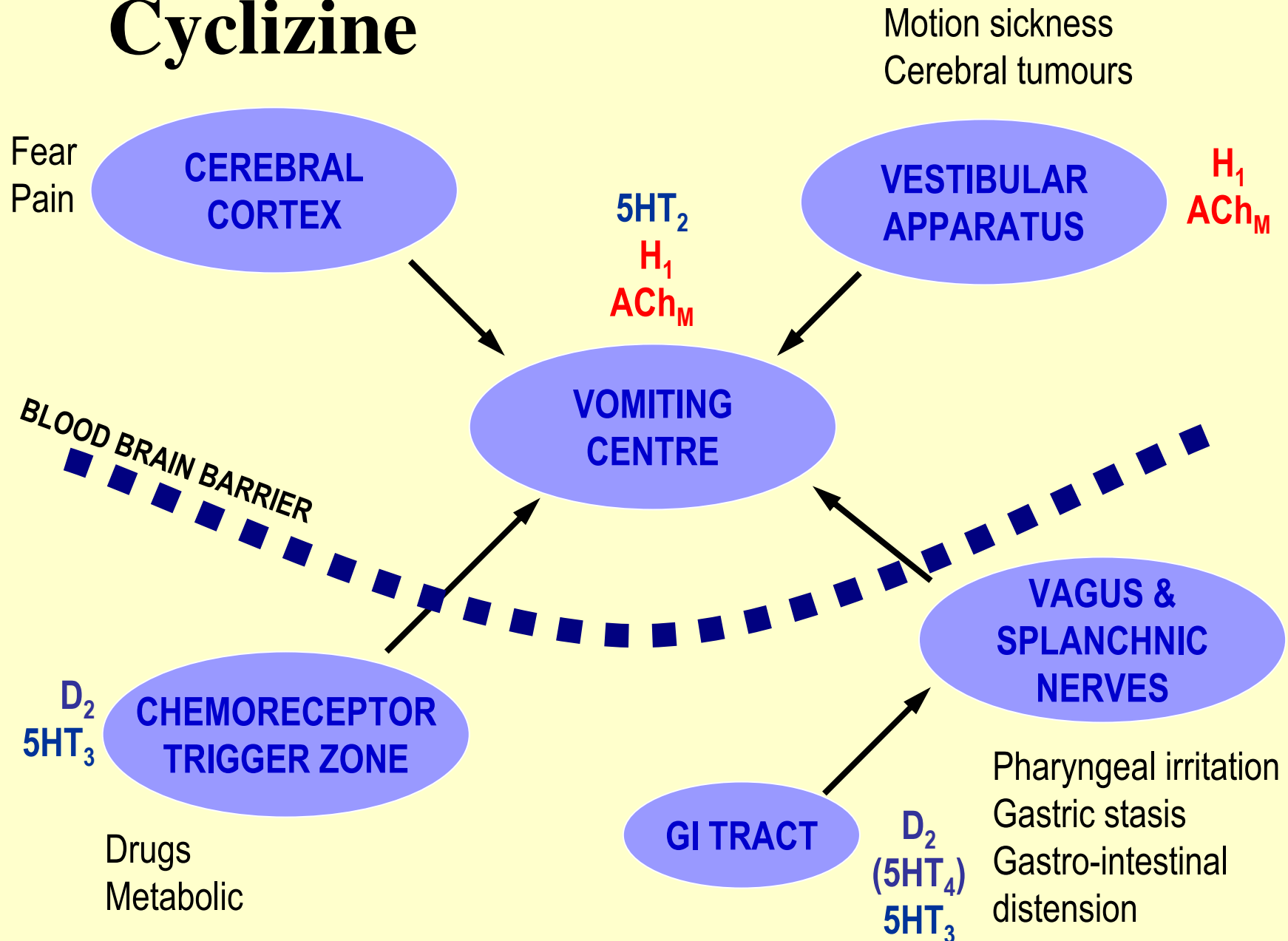
Neuropharmacology



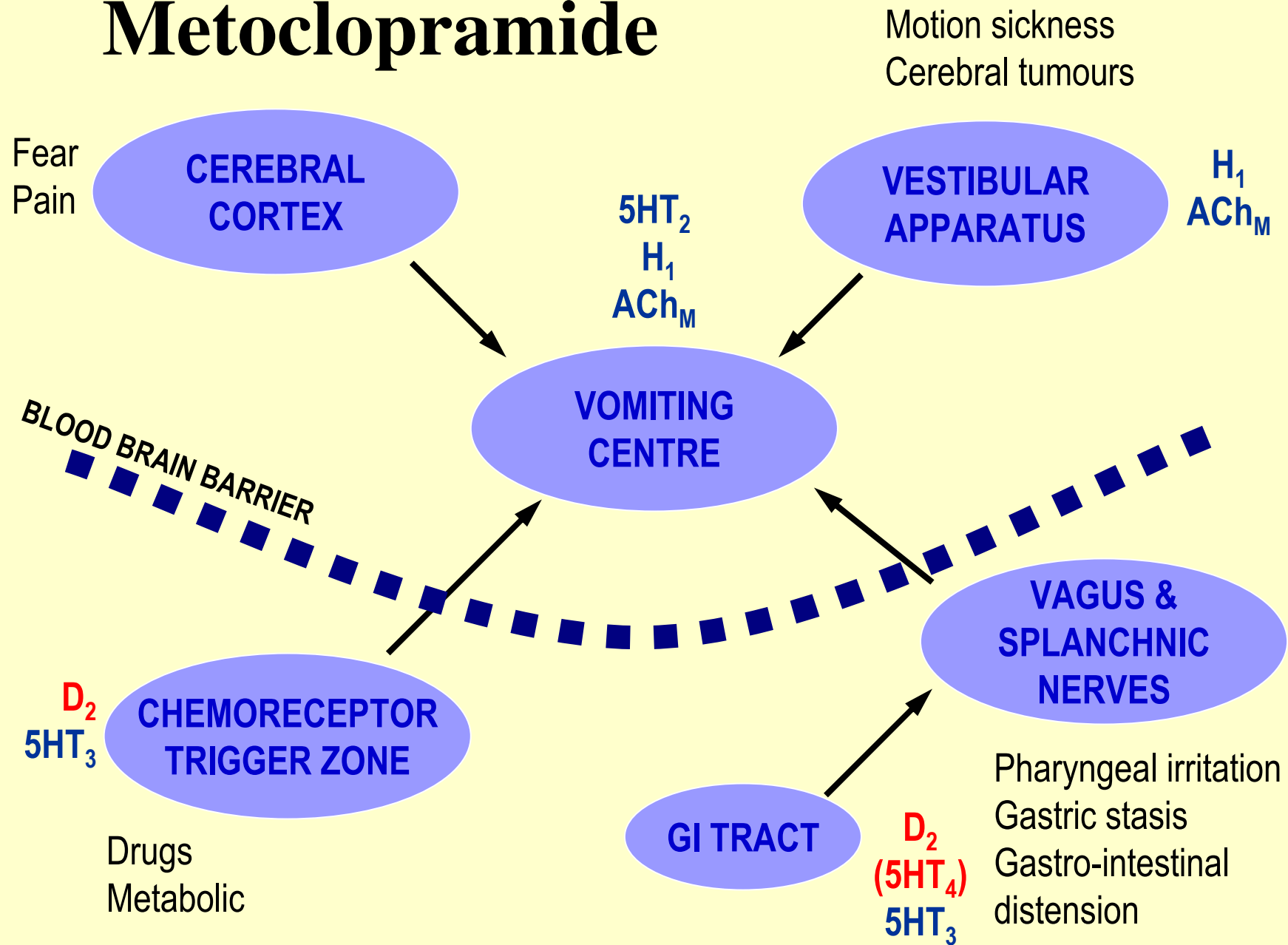
Haloperidol



Cyclizine



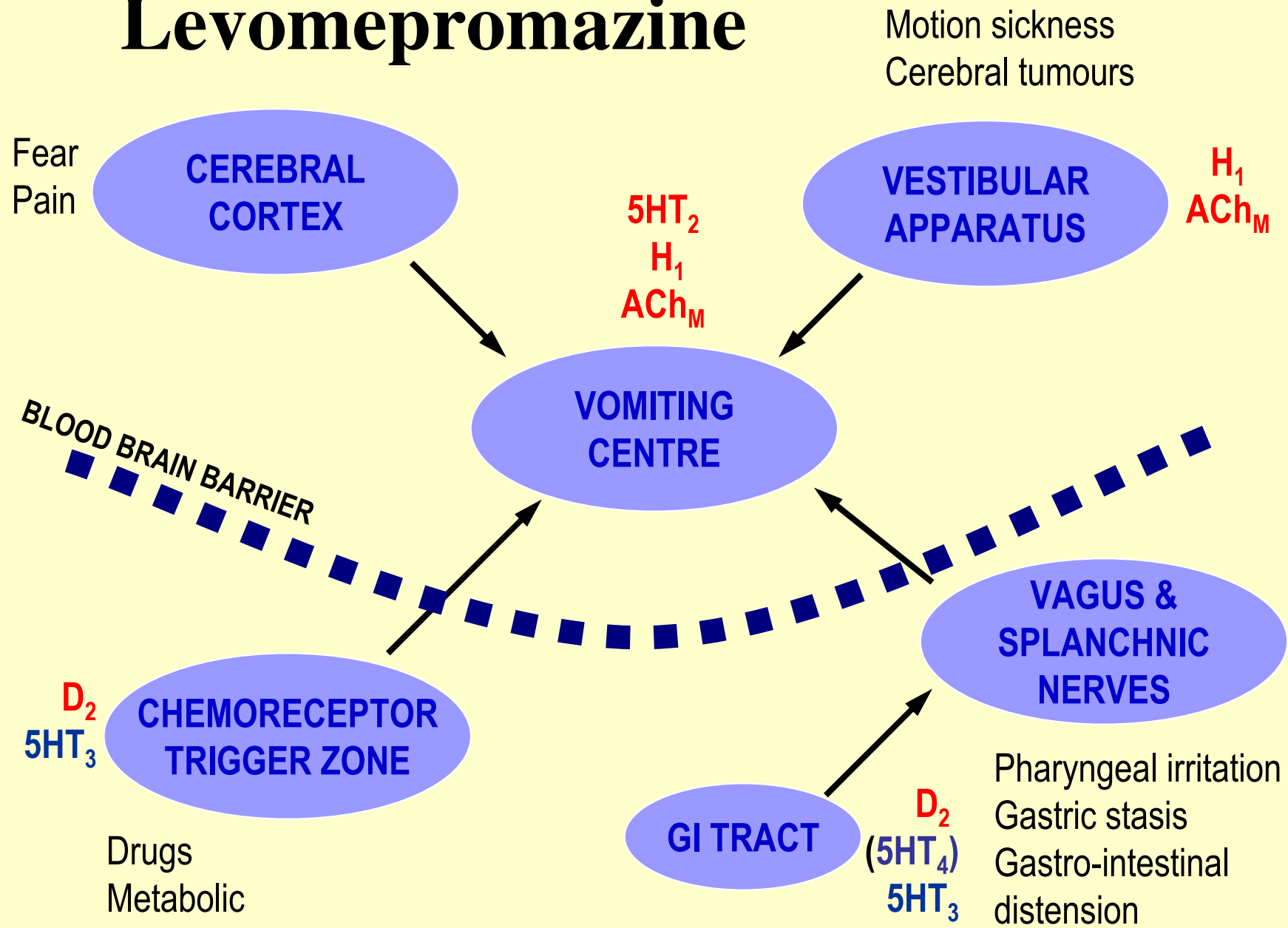
Metoclopramide



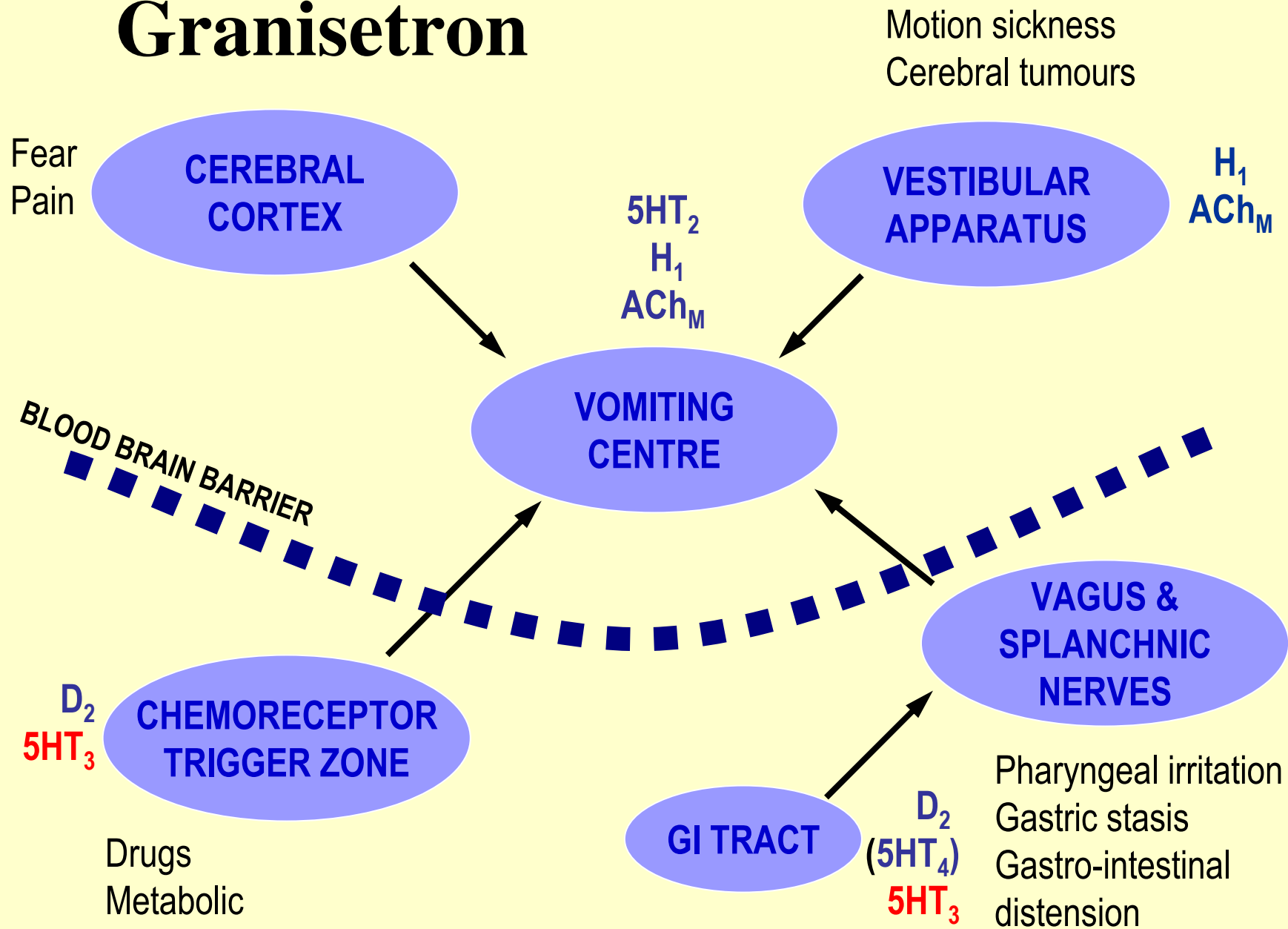
First line drugs

- Metoclopramide 10mg tds po / 30-60mg CSCI
 - GI obstruction without colic (functional/partial mechanical)
- Haloperidol 1.5 - 2.5mg od/bd po / 3-5mg CSCI
 - Chemical causes including opioids, renal failure
- Cyclizine 50mg tds po / 100-150mg CSCI
 - Raised intracranial pressure, motion-induced

Levomepromazine



Granisetron



Second line drugs

- Levomepromazine 6 - 12.5mg od po/sc
 - Unknown or multiple causes, anxiety-related
- Granisetron 1mg od/bd po/sc
 - Chemical causes, GI obstruction, RT involving bowel

Miscellaneous drugs

- Hyoscine butylbromide 60-120mg CSCI
 - Mechanical GI obstruction (first line)
- Octreotide 300-600mcg CSCI
 - Mechanical GI obstruction (second line)
- Dexamethasone 4-8mg/day po/sc
 - Raised intracranial pressure, GI obstruction
- Benzodiazepines
 - Anxiety-induced symptoms

Prescribing points

- Prescribe regular and p.r.n. antiemetic
- Both nausea and vomiting reduce enteral drug absorption; use subcutaneous route
- Use oral route only for symptom prophylaxis
- Use combinations with complimentary actions eg cyclizine and haloperidol
- Avoid antagonistic combinations eg cyclizine and metoclopramide
- Levomepromazine can replace drug combinations

Summary

- The key to managing nausea and vomiting is to determine the cause
- A detailed description of the symptom can help identify the cause
- Always consider reversible causes
- The cause of the symptom guides the choice of antiemetic



**SOMETIMES YOU ALMOST FEEL YOU
KNOW WHAT IT'S ALL ABOUT.**

Questions and Cases

