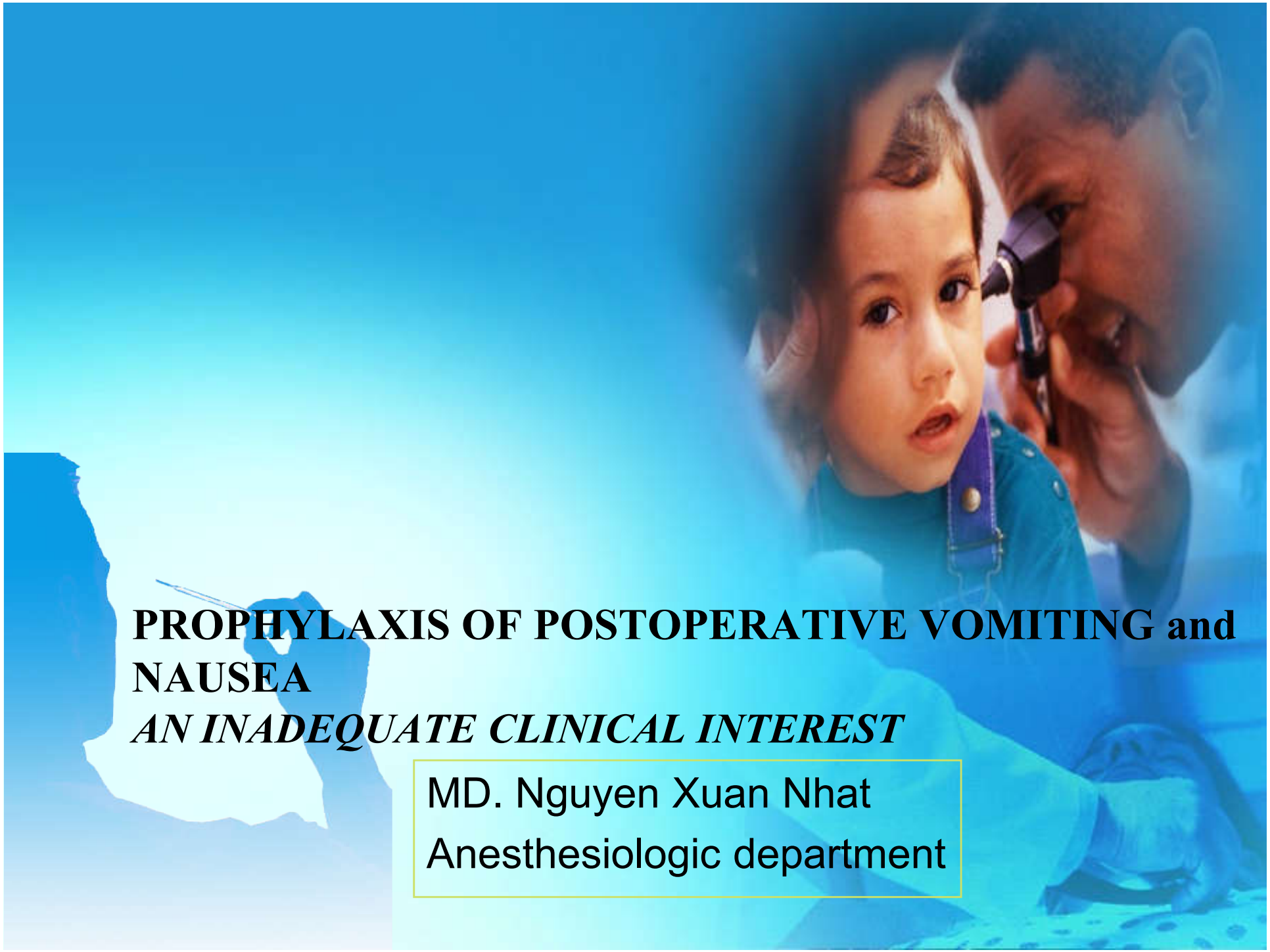


PROPHYLAXIS OF POSTOPERATIVE VOMITING and NAUSEA

AN INADEQUATE CLINICAL INTEREST

MD. Nguyen Xuan Nhat
Anesthesiologic department

INTRODUCTION

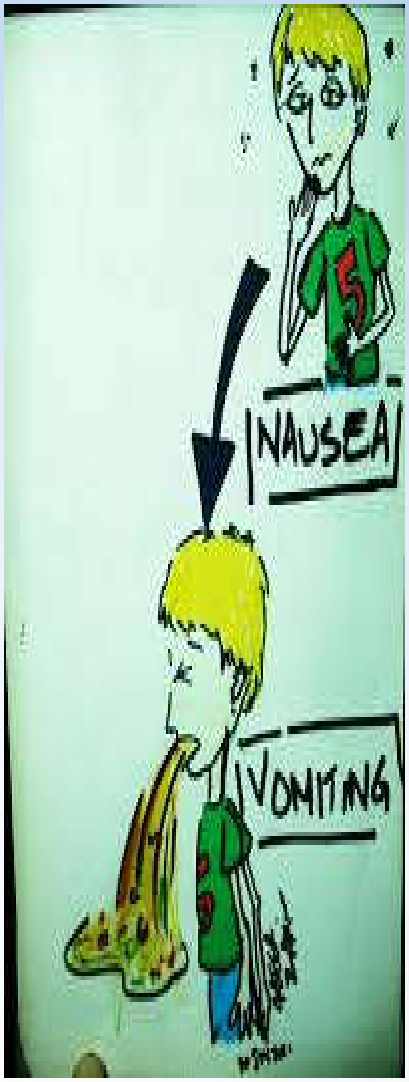
- Post operative vomiting and nausea (POVN) is a common and distressing in children patient.
- The general incidence of vomiting is about 30%, nausea is about 50% and high – risk patient is about 80%.
- Unresolved POVN may result in PACU, and increase care cost.

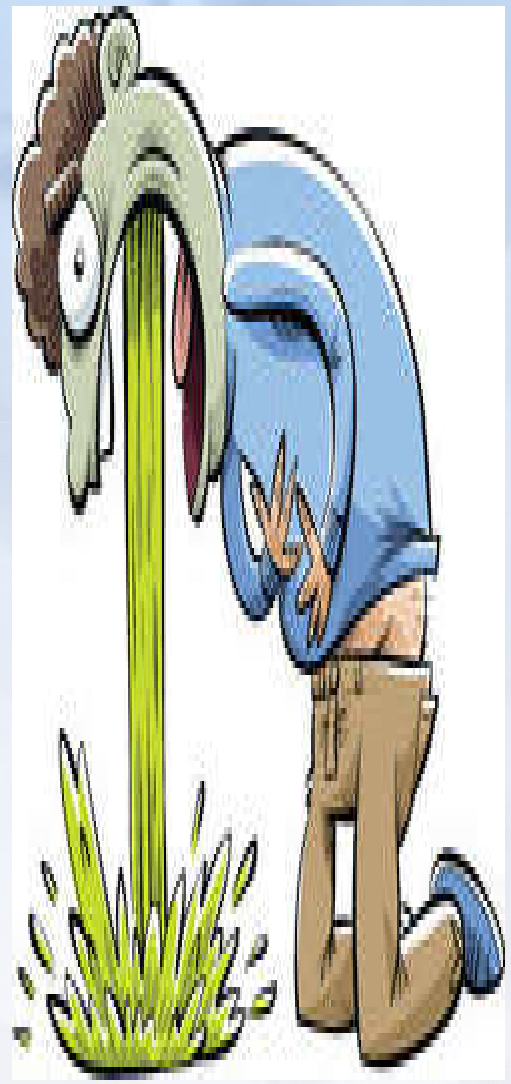
INTRODUCTION

- The goal of POVN prophylaxis is to decrease POVN and therefore patient-related distress and reduce health cost.

- This guideline is to provide comprehensive information to physicians, nurses, pharmacists, and health care providers strategy to prevent and treat POVN.

INTRODUCTION





Patient factors

B **Age:** Above 3 yrs: markedly increased risk

B **History of POV**: is an independent risk factor of subsequent POV in children

C **Motion sickness**: is likely an independent risk factor of subsequent POV in children

D **Gender**: Post pubertal girls have an increased incidence of POV, which may be related with sex hormone.

Preoperative anxiety: Well conducted in school – aged children

Smoking: In adult: less susceptive to POV, In children: no data published

Obesity: No relationship between obesity and POV

Surgical factors

A Strabismus surgery

A Tonsillectomy ± Adenoidectomy

C Surgical duration > 30 min under GA

Anesthetic factors

A **Volatile agents**: Increase risk of emesis

B **Perioperative opioids**: Increase risk of POV with long – acting agents

B **Perioperative fluids**: Intraoperative fluids may reduce POV in day case surgery. Children should drink before discharge, but not mandatory.

C **Nitrous oxide**: Without increasing of POV

D **Anticholinesterase drugs** (Neostigmine): Increase POV in children

Pharmacological

Table 5. Antiemetic Doses for Prophylaxis of POV in Children

Drug	Dose	Evidence
Dexamethasone	150 mcg/kg up to 5 mg	A1[332]
Dimenhydrinate	0.5 mg/kg up to 25 mg	A1[154]
Dolasetron	350 mcg/kg up to 12.5 mg	A2[333]
Droperidol[a]	10–15 mcg/kg up to 1.25 mg	A1[140]
Granisetron	40 mcg/kg up to 0.6 mg	A2[334]
Ondansetron[b]	50–100 mcg/kg up to 4 mg	A1[335]
Tropisetron	0.1 mg/kg up to 2 mg	A1[97]

These recommendations are evidence based, and not all the drugs have an FDA indication for PONV. Drugs are listed alphabetically.

[a]See FDA black box warning. Recommended doses 10 to 15 mcg/kg.

[b]Approved for POV in pediatric patients aged 1 month and older.

Prevention of POVN

A **High risk:** IV ondansetron 0.05 mg/kg and Dexamethasone 0.15 mg/kg

A **Increased risk:** only either IV ondansetron 0.05 mg/kg or Dexamethasone 0.15 mg/kg

D **High risk:** considered intravenous anesthesia and alternatives to opioid analgesia

Pharmacologic combination

Table 4. Pharmacologic Combination Therapy for Adults and Children

Adults

- Droperidol + dexamethasone[47] (A1)
- 5-HT3 receptor antagonist + dexamethasone[47,120,189,192,32747,120,189,192 327](A1)
- 5-HT3 receptor antagonist + droperidol[47,140,188,257] (A1)
- 5-HT3 receptor antagonist + dexamethasone + droperidol (A2)
- Ondansetron + casopitant[118 117117,118] or TDS[187] (A1)

Combinations in children

- Ondansetron, 0.05 mg/kg, + dexamethasone, 0.015 mg/kg[328,329] (A1)
- Ondansetron, 0.1 mg/kg, + droperidol, 0.015 mg/kg[330] (A1)
- Tropisetron, 0.1 mg/kg, + dexamethasone, 0.5 mg/kg[331](A1)

See Table 5 for dose ranges for children.

Treatment established POVN

B

IV ondansetron 0.05 mg/kg who have not been given prophylaxis

D

Another class should be given, who has been given prophylaxis


Thanks for listening
safe surgery saves lives