



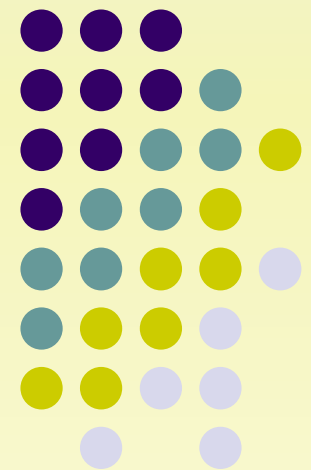
Tasmania



Hyperemesis Gravidarum

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Antenatal Shared Care Day

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Pregnancy Sickness

- Up to 80% of pregnant women have NVP
- Approximately 30% of pregnant working women need time off
- Hyperemesis reported to be the reason for around 35 terminations per year in UK
- Only 13% have symptoms exclusively in the mornings
- Up to 2% require admission for rehydration

Hyperemesis Gravidarum

- Severe end of spectrum of NVP
- Objective definition:
 - Loss of 5% body weight
 - Ketonuria
- Incidence 0.3 – 2%
- Usually improves in latter half of pregnancy but may persist

Pathogenesis

- Unknown
 - Possibly related to level of HCG and/or oestrogen
 - Psychological factors
 - ? Ambivalent feelings towards pregnancy
 - Somatisation to stress
 - Psychological response to nausea exacerbates condition
 - Abnormalities of gastric motility – conflict between bradygastria and tachygastria
 - Helicobacter pylori

Investigations

- The standard initial evaluation of pregnant women with persistent vomiting includes:
 - measurement of weight
 - orthostatic blood pressures
 - serum free T4 concentration
 - serum electrolytes
 - urine ketones
 - ultrasound examination to exclude gestational trophoblastic disease and multiple gestation

Treatment

- Primarily supportive, as symptoms usually resolve spontaneously by mid-pregnancy
- Fluids & Nutrition
 - Response to rehydration is usually rapid
 - Vitamins electrolytes and minerals
 - Thiamine recommended if vomiting >3 weeks
 - Tube feeding and enteral feeding may be needed

Nausea & Vomiting in Pregnancy: Dietary



- Eating before or as soon as feeling hungry
- Frequent small meals to avoid ketosis
- Dietary manipulations
 - sour or salty foods
 - eliminate spicy foods
 - thisane – mint, lemon, raspberry leaf or herb teas
- Powdered ginger proved better than placebo

Non-pharmacological

- Avoidance of environmental triggers, especially strong odours
- Powdered ginger extract 1g/day or ginger capsules 250 mg TID or QID
- Acupressure wristbands (acupuncture pressure point pericardium 6)
- Acupuncture (pressure points liver meridian 3 and spleen 6)
- Psychotherapy
- Hypnotherapy



Pressure or massage at the P6 acupressure point is reported in some studies to relieve motion sickness. The point is found three of the patient's fingerbreadths proximal to the proximal wrist fold, between the palmaris longus and flexor carpi radialis tendons, shown in this picture by the tip of the pen.

Pharmacological

- Pyridoxine (vitamin B6) more useful for morning sickness than for vomiting (10-25 mg. tds)
- Combined with doxylamine succinate and dicyclomine (Debendox) gives significant improvement in vomiting
- Antihistamines (H1 antagonists) safe and effective (RR for vomiting 0.34) and reduced incidence of malformations (RR 0.76)
- Phenothiazines effective
 - Some better than others – Phenergan, Stemetil, cyclizine
 - Often cause drowsiness
- Metoclopramide, Ondansetron, Droperidol not of proven safety, but effective



Steroids

- Discordant results in trials
- Role of steroids unsettled
- One large trial of 110 patients showed no difference in readmission rates
- Should only be used as a last resort
- Methyl prednisolone 16 mg. 8-hourly for three days
- Contraindicated in first ten weeks

Antacids

- Reflux common in pregnancy
- Nausea persisting after 20 weeks indicates trial of antacids
- Rennies, Quik-ease, Tums, Gelusil, Mylanta, Titralac available over counter
- Gastrogel, Mucaine, Alu-Tab require prescription
- H₂ receptor antagonists and PPIs effective and safe, but should not be first line choices

Recommendations

- Canadian & American Guidelines both state:
 - Doxylamine/pyridoxine combination should be standard first line treatment
- NICE (UK) states:
 - *If* a woman requests or would like treatment use an antihistamine
 - *Pyridoxine not recommended* – concerns about toxicity not resolved
- National Health Knowledge Summary:
 - Promethazine or cyclizine

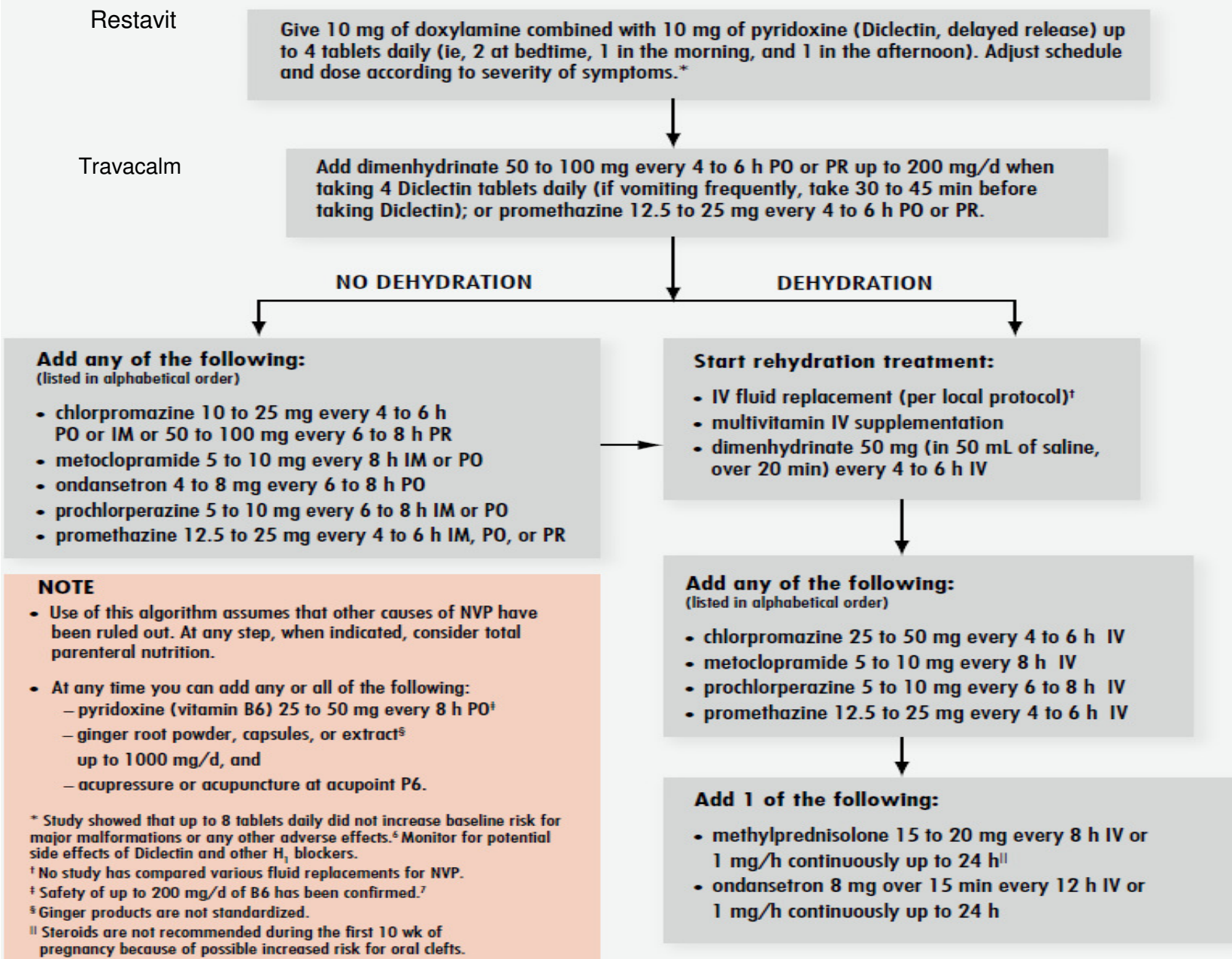
Survey Results

- Four of nine responders had admitted a patient to hospital in the previous month
- Majority gave dietary advice
- Pyridoxine (B6) – 1 always; 5 frequently; 2 occasionally; 1 never
- Doxylamine (Restavit) – 1 frequently; 1 occasionally; 6 never; one no reply
- Maxolon – 5 frequently; 2 occasionally; one never
- Ondansetron – 5 frequently; 1 occasionally; 2 never; one no reply

Survey Results

	Always	Frequently	Occasionally	Never
Pyridoxine	1	5	2	1
Doxylamine	-	-	1	6 (1NR)
Maxolon	-	5	2	1
Ondansetron	-	5	1	2 (1NR)
Cyclizine	-	-	2	7
Promethazine		3	4	2

Figure 1. Algorithm for treatment of nausea and vomiting of pregnancy: *If no improvement, proceed to next step.*



IM — intramuscular, IV — intravenous, NVP — nausea and vomiting of pregnancy, PO — by mouth, PR — by rectum.