

# Management of Refractory Nausea and Vomiting in Pregnancy – Case Report

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## Objectives:

- Understand difficulties and challenges in managing refractory nausea and vomiting in pregnancy
- Understand the different modalities of treating refractory hyperemesis gravidarum
- Re-visit other approaches to hydration and nutrition in refractory nausea and vomiting in pregnancy

## Case Report:

- 29-year-old G4P3003 at 30 weeks and 1 day gestation presenting with persistent nausea and vomiting in pregnancy.
- Transferred from another institution with hyperemesis gravidarum refractory to medical treatment. She had hyperemesis gravidarum in previous pregnancies.
- Obstetric history included three vaginal deliveries all complicated by severe hyperemesis gravidarum (HG), smoking history including chronic marijuana use during pregnancy because of HG
- Lost > 30Lb on presentation
- Hemoglobin 9.7, hematocrit 28.6.
- Ketonuria, hypokalemia, hypoalbuminemia and hypoproteinemia.
- Normal electrocardiogram (EKG).
- Fetal heart rate at 138 beats per minute with accelerations and no deceleration.
- Ultrasound showed viable singleton intrauterine pregnancy with 30% estimated fetal weight

| Initial Clinical Assessment in Severe Nausea and Vomiting in Pregnancy<br>- modified from NICE recommendations                                                                                      |                  |          |                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Recommendation                                                                                                                                                                                      | Evidence Quality | Strength | Rationale for the Recommendation                                                                                                                                                                                                                                                                           |
| <b>Combinations of different drugs should be used in women who do not respond to a single antiemetic. Suggested antiemetics for UK use are given in Appendix III.</b>                               | 4                | GPP      | Various drug classes have different mechanisms of action and work synergistically, therefore, combination antiemetics should be used in women who do not respond to a single agent. Some women may require combinations of two or more medications from first- and second- line options (see Appendix III) |
| <b>A delayed-release combination of doxylamine and pyridoxine (vitamin B6) is the only licensed treatment of NVP in the UK so can be used first-line for mild-moderate NVP requiring treatment.</b> | 2++              | B        | A larger improvement in PUQE score from baseline to day 15 and increased wellbeing has been reported as compared with placebo                                                                                                                                                                              |
| <b>For women with persistent or severe HG, the parenteral, transdermal, or rectal route may be necessary and more effective than an oral regimen.</b>                                               | 2-               | D        |                                                                                                                                                                                                                                                                                                            |
| <b>Corticosteroids should be reserved for cases where standard therapies have been ineffective and used in combination with antiemetics.</b>                                                        | 1+               |          | Systematic review suggests a beneficial effect for steroids.                                                                                                                                                                                                                                               |

| When Should You Consider Enteral and/or Parenteral Nutrition in Hyperemesis Gravidarum<br>- modified from NICE recommendations                                                                                                                                |                  |          |                                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Recommendation                                                                                                                                                                                                                                                | Evidence Quality | Strength | Rationale for the Recommendation                                                                                                              |
| When all other medical therapies have failed to sufficiently manage symptoms, enteral tube feeding or parenteral treatment should be considered with a referral to gastroenterology and a multidisciplinary approach in parallel to ongoing medical therapies | 3                | D        | Total parenteral nutrition is a high-risk intervention; however, it may be useful in refractory cases to ensure sufficient nutritional intake |

## Discussion:

Case report of refractory nausea and vomiting in pregnancy managed with a combination of methods including antiemetics, steroid administration, tube feeds and intravenous access for hydration at home.

Inclusion of pharmacy, dietary, nutrition and social work to eliminate any precipitating factors in hospital/home and monitor drug-drug interaction to avoid potential complications such as heart block, constipation, etc.

## Conclusion:

This is an opportunity to discuss the intricate management of refractory nausea and vomiting in pregnancy with a successful outcome. Options for treatment of refractory nausea and vomiting in pregnancy abound, however, care must be taken to avoid drug-drug interactions and other complications of polypharmacy.

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## Hierarchy of Treatment Options for Nausea and vomiting in Pregnancy- Courtesy of ACOG

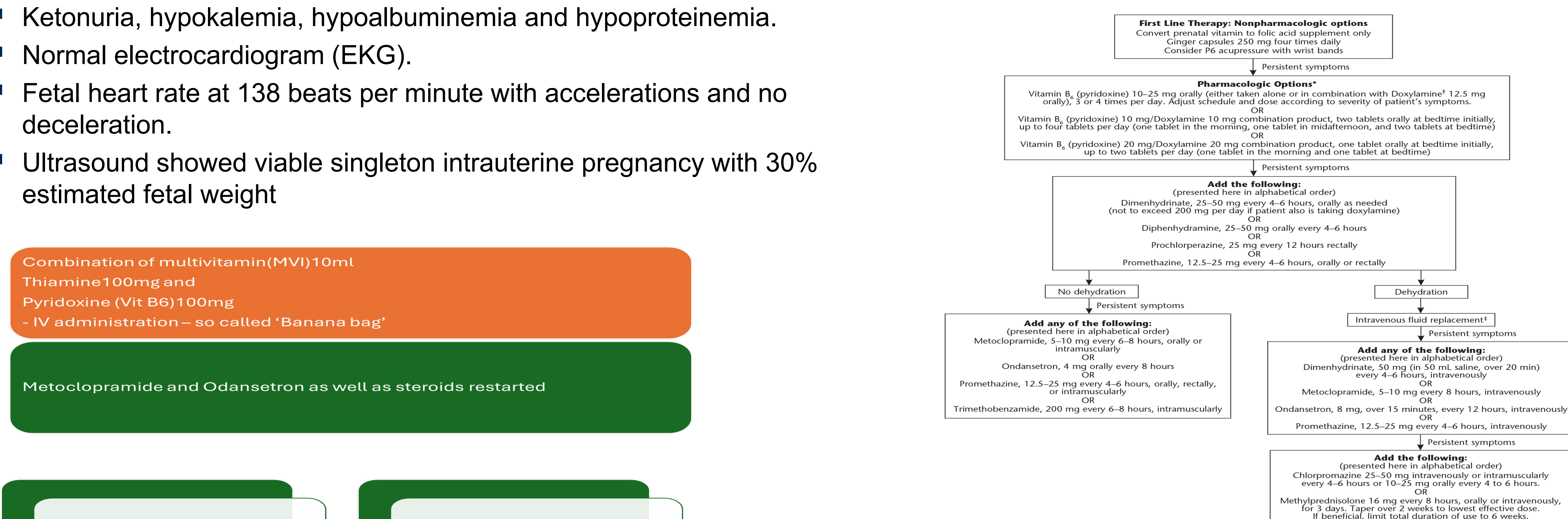


**Figure 1.** Algorithm of therapeutic treatment of nausea and vomiting of pregnancy (If no improvement, proceed to next step in algorithm). This algorithm assumes other causes of nausea and vomiting have been ruled out. At any step, consider enteral nutrition if dehydration or persistent weight loss is noted. \*Some antiemetic medications have only been approved by the U.S. Food and Drug Administration for use in nonpregnant patients; however, off-label use is common. Obstetricians and other obstetric care providers should counsel patients and document such discussions accordingly. Care should be exercised if multiple antiemetic medications are used simultaneously. Parallel use of some medications (see text) may result in an increased risk of adverse effects. †In the United States, doxylamine is available as the active ingredient in some over-the-counter sleep aids; one half of a scored 25-mg tablet can be used to provide a 12.5-mg dose of doxylamine. †Thiamine, intravenously, 100 mg with the initial rehydration fluid and 100 mg daily for the next 2–3 days (followed by intravenous multivitamins), is recommended for women who require intravenous hydration and have vomited for more than 3 weeks to prevent a rare but serious maternal complication, Wernicke encephalopathy. (Modified from Levichek Z, Atanackovic G, Oepkes D, Maltepe C, Elanarson A, Magee L, et al. Nausea and vomiting of pregnancy. Evidence-based treatment algorithm. Can Fam Physician. 2002;48:267–8, 277.)