Abstract
Introduction
Hyperemesis gravidarum is described as unexplained excessive nausea and vomiting during pregnancy, leading to fluid, electrolyte imbalance, nutritional deficiency and weight loss.

The Hypothesis
We hypothesise that orexigenic and anorexigenic hormones might have an important role in aetiology-pathogenesis of hyperemesis gravidarum and weight changes during pregnancy. If we can prove this hypothesis, our medical approach to hyperemesis or cases with eating disorders during pregnancy would change. We would be able to provide an effective medication to these pregnant women and thus improve quality of life and prevent high health costs.

Evaluation of Hypothesis
The gastrointestinal tract and adipose tissue are the source of important appetite-regulating hormones. They are included in energy metabolism, and have roles in modifying appetite, insulin resistance and obesity. These hormones may also have important role in aetiology-pathogenesis of hyperemesis gravidarum and weight changes during pregnancy.

Conclusion
Further work is required to fully understand the multiple signals regulating appetite and body weight. We hope that this hypothesis stimulates further research.

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We hypothesise that orexigenic and anorexigenic hormones might have an important role in aetiology-pathogenesis of hyperemesis gravidarum and weight changes during pregnancy. If we can prove this hypothesis, our medical approach to hyperemesis or cases with eating disorders during pregnancy would change. We would be able to provide an effective medication to these pregnant women and thus improve quality of life and prevent high health costs.

The GI tract and adipose tissue are the significant endocrine organs in the body and they are the source of important appetite-regulating hormones. Appetite hormones secreted from the GI tract (acyl-ghrelin, obestatin, cholecystokinin (CCK), peptide YY and glucagon-like peptide-1 (GLP-1)) and from adipose tissue (leptin, adiponectin and resistin) could be responsible for hyperemesis gravidarum.

Evaluation of Hypothesis
It was shown by many studies that gut hormones administered at physiological concentrations can influence appetite in rodent models and humans\(^7\). Acyl-ghrelin, obestatin, CCK, peptide YY and GLP-1 are the appetite-regulating hormones secreted from the GI tract. They act as meal initiators and terminators. Of these, ghrelin is the only known orexigenic gut hormone, whereas the others are satiety factors\(^9\).

In the study by Hotta et al.\(^\text{10}\) on anorexia nervosa patients, intravenous infusion of ghrelin twice a day increased hunger sensation and daily
The use of appetite hormones as therapeutic agents would have the advantage of targeting only appetite control systems. Since these hormones are present natively in the body, side effects and desensitisation due to long-term usage of these agents would be less likely. Further work is required to fully understand the multiple signals regulating appetite and body weight. We hope that this hypothesis stimulates further research.

**Abbreviations list**

CCK, cholecystokinin; CNS, central nervous system; GI, gastrointestinal; GLP-1, glucagon-like peptide-1

**References**

18. Meier U, Gressner AM. Endocrine regulation of energy metabolism: review of pathobiochemical and clinical