



Letter to the Editor

Hyperemesis gravidarum: it is time to put an end to the misguided theory of a psychiatric etiology

To the Editor,

The cause of hyperemesis gravidarum (HG) is unknown. An unfortunate emphasis has been placed on the theory of a psychiatric etiology that is not supported by current scientific literature. This unfounded bias often leads to poor treatment of patients by their providers, family members and friends, and limits scientific progress toward understanding the biological basis of the disease. A critical reading of recent scientific literature provides compelling evidence against a psychiatric etiology.

The majority of women with HG have no psychological diagnoses prior to their HG pregnancy. For example, Seng et al. [1] found less than 90% have a psychiatric disorder preceding HG, and Simpson et al. [2] and D’Orazio et al. [3] found no evidence for a psychosomatic etiology and no evidence to support an association between HG and personality characteristics. Even in this study, Uguz et al. show that the majority (67.3%) of women with HG do NOT have a preexisting mood or anxiety disorder.

There are several reasons, never mentioned to our knowledge, that likely explain the increased incidence of preexisting psychiatric disorders reported in women with HG:

- 1) *Controls* — Control groups often consist of women willing to participate in a study of a disease that they themselves do not have. It is likely that participation would attract a specific personality — someone who would be willing to put in the time and effort to be involved in a study of a disease they do not have would be less likely to be a person who is depressed or anxious about the time involved and the risks of participation.
- 2) *Prior HG pregnancy* — HG often recurs [4] and therefore, for accuracy, studies should be limited to first pregnancies. It is known that HG is a form of starvation in pregnancy and can lead to the need for therapeutic termination, extreme weight loss, and prolonged duration of symptoms that can last until term [5,6]. Thus HG pregnancies are more likely to

result in posttraumatic stress symptoms, anxiety and depression [7]. Therefore, studies addressing preexisting psychological diagnoses should be, but are not, limited to first HG pregnancies only. Otherwise, studies have no way to rule out disorders that were the outcome of a previous HG pregnancy, thus biasing results.

- 3) *In utero exposure to HG* — Similar to studies of offspring exposed to starvation in utero, it has been shown in two well-controlled studies by Mullin et al. [8] that offspring exposed to HG in utero are more likely to have personality disorders as adults. Approximately, a third of women with HG have a mother who had severe nausea while pregnant with them [9]. This can easily explain the increased incidence of preexisting psychological diagnoses and shows that, while the diagnoses may be more common in women with HG, they are unlikely to be causal: women with HG whose mothers did not have HG did not have any increased risk of psychological diagnoses [8].
- 4) *Other factors* — So much attention is paid to the psychological diagnoses when many other factors have been found to be increased at similar or even greater significance levels including hormone levels. More than 40 years after factors such as personality disorders and even hCG and estrogen were first implicated, there is still no clear understanding of the cause and effect. Current methods of study appear unlikely to resolve this and new approaches are warranted.

We need to focus our attention on understanding the true etiology of HG, rather than on blaming the personality of the patient. Prolonged nausea and vomiting during a time when women are well aware of the importance of nutrition are agonizing. Women with HG need our compassion, not our skepticism.

It has become increasingly clear that there is a genetic component to HG [9,10]. It is time to stop focusing on the minority of patients with a psychological history and start identifying the common predisposing genes, so that therapies can be designed to treat the cause of the disease in patients affected with hyperemesis gravidarum.

Marlena S. Fejzo, Ph.D.
Department of Maternal-Fetal Medicine
Keck School of Medicine
University of Southern California
Los Angeles, CA, USA
Department of Statistics
University of California, Los Angeles
Los Angeles, CA, USA

Kimber MacGibbon, R.N.
Hyperemesis Education and Research Foundation
Leesburg, VA, USA

<http://dx.doi.org/10.1016/j.genhosppsych.2012.06.019>

References

- [1] Seng JS, Schrot JA, van De Ven C, Liberzon I. Service use data analysis of pre-pregnancy psychiatric and somatic diagnoses in women with hyperemesis gravidarum. *J Women's Health (Larchmt)* 2011;20(1):137–44.
- [2] Simpson SW, Goodwin TM, Robins SB, Rizzo AA, Howes RA, Buckwalter DK, et al. Psychological factors and hyperemesis gravidarum. *J Women's Health Gend Based Med* 2001;10(5):471–7.
- [3] D'Orazio LM, Meyerowitz BE, Korst LM, Romero R, Goodwin TM. Evidence against a link between hyperemesis gravidarum and personality characteristics from an ethnically diverse sample of pregnant women: a pilot study. *J Women's Health* 2011;20:137–44.
- [4] Fejzo MS, MacGibbon KW, Romero R, Goodwin TM. Recurrence risk of hyperemesis gravidarum. *J Midwifery Women's Health* 2011;56(2):132–6.
- [5] Poursharif B, Fejzo MS, MacGibbon KW, Korst LM, Romero R, Goodwin TM. Psychosocial burden of hyperemesis gravidarum. *J Perinatol* 2008;28(3):176–81.
- [6] Fejzo MS, Poursharif B, Korst LM, Munch S, MacGibbon KW, Romero R, Goodwin TM. Symptoms and Pregnancy Outcomes Associated with Extreme Weight Loss among Women with Hyperemesis Gravidarum. *J Women's Health* 2009;18(12):1981–7.
- [7] Christodoulou-Smith J, Gold JI, Romero R, Goodwin TM, MacGibbon KW, Mullin PM, et al. Posttraumatic stress symptoms following hyperemesis gravidarum. *J Matern Fetal Neonatal Med* 2011;24(11):1307–11.
- [8] Mullin PM, Bray A, Vu V, Schoenberg-Paik F, MacGibbon K, Romero R, et al. No increased risk of psychological/behavioral disorders in siblings of women with hyperemesis gravidarum (HG) unless their mother had HG. *J Dev Orig Health Dis* 2012, Available on CJO 2012 doi:10.1017/S2040174412000220, <http://journals.cambridge.org>.
- [9] Zhang Y, Cantor RM, Macgibbon K, Romero R, Goodwin TM, Mullin PM, et al. Familial aggregation of hyperemesis gravidarum. *Am J Obstet Gynecol* 2011;204:230.e1-7.
- [10] Vikanes A, Skjaerven R, Grijbovski AM, Gunnes N, Vangen S, Magnus P. Recurrence of hyperemesis gravidarum across generations: population based cohort study. *BMJ* 2010;29:340.