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GENETIC AND MATERNAL FACTORS IN HYPEREMESIS GRAVIDARUM: A SYSTEMATIC REVIEW

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Abstract

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Abstract

Hyperemesis gravidarum (HG) is a severe form of nausea and vomiting during pregnancy (NVP), which can lead to extreme dehydration, significant weight loss, and electrolyte and metabolic imbalances. Importantly, early identification of HG symptoms can help to reduce its severity and prevent complications. Although HG is associated with many adverse maternal and fetal outcomes, there is limited understanding of the risk factors. This review provides current data on genetic and maternal factors that are linked to HG. All observational studies published in English that investigated the genetic or maternal factors associated with HG from 2011 until 2021 were systematically searched using the PubMed, Scopus, and ProQuest electronic databases. A total of 1462 citation titles was identified, of which 47 potentially relevant abstracts were screened. Of those, 15 studies met the inclusion and exclusion criteria. The genetic variants in the ryanodine receptor 2 gene (RYR2), growth differentiation factor-15 (GDF15), and protein-coding insulin-like growth factor-binding protein 7 (IGFBP7) were found to be associated with HG. On the other hand, several potential maternal factors contributing to the onset of HG were age, Helicobacter pylori infection, body mass index (BMI) status, a history of HG in a previous pregnancy, carrying a female fetus, high serotonin levels, and reproductive factors. In view of the lack of strength of the overall evidence for risk factors related to HG, it is first imperative to establish a precise definition for HG in a diverse study population. Nevertheless, to conclude, this review was able to provide current data on genetic and maternal factors that are associated with HG.

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Genetic; Hyperemesis Gravidarum; Nausea; Pregnancy; Risk Factors; Vomiting

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