

Case Report: Comprehensive Midwifery Care in Very High-Risk Pregnancy with Hyperemesis Gravidarum

Febriarti Putri Primanti Cahyaningtyas¹(corresponding author), Triana Septianti Purwanto², Sunarto Sunarto³

¹Department of Midwifery, Poltekkes Kemenkes Surabaya, Indonesia; putriayfebri@gmail.com

²Department of Midwifery, Poltekkes Kemenkes Surabaya, Indonesia; trianaanti80@gmail.com

³Department of Midwifery, Poltekkes Kemenkes Surabaya, Indonesia; sunartoyahyamuqaffi@gmail.com

Submitted: July 31, 2026 -Revised: August 21, 2026 -Accepted: August 26, 2026 -Published: September 30, 2026

ABSTRACT

Hyperemesis gravidarum (HG) is a multifactorial condition that may be complicated by high-risk pregnancy characteristics. This descriptive case report was conducted from January 27 to February 9, 2026, at Puskesmas P, Parang District, Magetan Regency, Indonesia, involving a 37-year-old grandemultigravida (G5P4A0H3) with a KSPR score of 22. Data were collected using the SOAP approach, direct observation, serial PUQE assessment, weight monitoring, and blood pressure measurement. The patient presented with recurrent nausea and vomiting, reduced oral intake, 7.14% weight loss, dehydration, and a moderate initial PUQE score of 12. Management included intravenous rehydration, antiemetic therapy, nutritional counseling, supportive counseling, and serial monitoring. PUQE scores decreased to 11 on January 29, 6 on February 3, and 3 on February 9, with cessation of vomiting, improved oral intake, and weight recovery to 53 kg. Discussion: The case demonstrates the need for a dynamic management strategy that progresses from acute stabilization of dehydration and nutritional compromise to continued surveillance of the underlying very high-risk pregnancy. Comprehensive midwifery care integrating medical collaboration, nutritional and supportive interventions, serial symptom assessment, and antenatal surveillance was associated with clinical resolution of HG and recovery of maternal intake and weight.

Keywords: Pregnancy very high risk, Hyperemesis Gravidarum, PUQE.

INTRODUCTION

Hyperemesis gravidarum (HG) is the severe end of nausea and vomiting in pregnancy and can substantially impair maternal nutrition, hydration, quality of life, and daily functioning. The international Windsor definition describes HG as symptoms beginning before 16 weeks of gestation, with severe nausea and/or vomiting, inability to eat or drink normally, and marked limitation of daily activities; dehydration is a contributory sign.⁽¹⁾ Although nausea and vomiting are common in early pregnancy, HG occurs in a smaller proportion of pregnancies and may require outpatient or inpatient management.^(2,3) Clinical assessment therefore needs to distinguish uncomplicated nausea and vomiting from a condition associated with clinically important weight loss, dehydration, nutritional compromise, or inability to maintain oral intake.

The risk profile of the woman in this case adds complexity to the management of HG. Mrs. H was 37 years old, G5P4A0H3, and had a KSPR score of 22, placing the pregnancy in the very high-risk category. Her obstetric history included grand multiparity, a short interpregnancy interval, previous cesarean section, history of IUFD, and breech presentation. Population-based studies have identified maternal and pregnancy characteristics associated with HG, including parity, previous HG, multiple pregnancy, and selected maternal conditions.^(4,5) In an Indonesian case-control study, parity, gestational age, pregnancy spacing, anemia, BMI, and other maternal characteristics were also associated with HG.⁽⁶⁻⁹⁾ These findings do not establish that every risk factor directly causes HG, but they support the importance of individualized surveillance when several risk characteristics coexist. Short interpregnancy intervals have also been associated with adverse perinatal outcomes in meta-analytic evidence from the Asia-Pacific region, reinforcing the need for careful antenatal surveillance in women with closely spaced pregnancies.⁽¹⁰⁾

The clinical consequences of HG are not limited to nausea and vomiting. Persistent symptoms may result in dehydration, weight loss, nutritional deficiencies, electrolyte disturbances, and reduced quality of life.^(2,11) Psychological morbidity is also relevant. A systematic review and meta-analysis found higher anxiety and depression symptoms among women with HG than among controls, supporting the inclusion of psychological support in comprehensive care. More recent evidence likewise indicates an association between depression and HG, although the direction of causality cannot be assumed. Consequently, care should address physical stabilization while also providing communication, education, emotional support, and follow-up.

Objective symptom assessment is useful for evaluating response to treatment. The Pregnancy-Unique Quantification of Emesis and Nausea (PUQE) is a validated tool for grading nausea and vomiting severity. Serial PUQE assessment can complement clinical findings such as oral intake, vomiting cessation, weight change, hydration status, and blood pressure. Current guidance recommends objective assessment and stepwise management, including rehydration when clinically indicated, antiemetic therapy, nutritional support, and escalation of care when symptoms persist.⁽³⁾ Non-pharmacological measures such as ginger may also reduce nausea in pregnancy, although the evidence is stronger for nausea than for vomiting and dosing remains variable.⁽¹²⁾

In this context, the present case report describes the course and comprehensive midwifery management of a very high-risk pregnancy complicated by HG. The purpose is to describe the assessment, serial monitoring, collaborative treatment, nutritional and supportive interventions, and follow-up response, while emphasizing the need for continued antenatal surveillance after acute HG symptoms improve.

METHODS

This study employed a descriptive case-report design to describe the clinical course and midwifery care of a 37-year-old pregnant woman (G5P4A0H3) at 10–11 weeks of gestation with a very high-risk pregnancy (KSPR score of 22) complicated by hyperemesis gravidarum (HG). The case was managed from January 27 to February 9, 2026, at Puskesmas P, Parang District, Magetan Regency, Indonesia. Data were collected through history taking, physical examination, clinical observation, medical record review, and serial follow-up using the SOAP framework. The data included the frequency and progression of nausea and vomiting, oral intake, weight changes, vital signs, signs of dehydration, and response to treatment. The severity of HG was assessed using the Pregnancy-Unique Quantification of Emesis and Nausea (PUQE) score. Clinical outcomes were evaluated based on changes in PUQE scores, cessation of vomiting, improved oral intake, hydration status, and weight recovery, while the underlying obstetric risk factors were assessed separately. Data were analyzed descriptively and presented as a chronological narrative and summary table, without inferential statistical analysis. Informed consent was obtained from the patient, and confidentiality was maintained by using initials instead of the patient's full name.

RESULTS

Mrs. H, aged 37 years, G5P4A0H3, was assessed at 10–11 weeks of gestation and had a KSPR score of 22, placing the pregnancy in the very high-risk category. The identified obstetric risk factors were maternal age of ≥ 35 years, grand multiparity, short interpregnancy interval, previous cesarean section, history of IUFD, and breech presentation. The coexistence of these characteristics required the management of HG to be integrated with continued antenatal surveillance rather than treating the vomiting episode as an isolated problem.

The clinical history showed that nausea began at approximately six weeks of gestation and progressively worsened, with the most severe symptoms occurring at nine to ten weeks. The condition eventually required hospitalization. At the initial assessment, the patient experienced recurrent nausea and vomiting accompanied by reduced nutritional intake and clinical signs of dehydration. The initial PUQE score was 12, corresponding to moderate symptom severity. The patient also experienced a 7.14% reduction from her pre-pregnancy weight, indicating clinically important weight loss in the context of persistent vomiting. These findings supported the need for active treatment and close monitoring.

Management during the acute phase included intravenous rehydration and antiemetic therapy in collaboration with the medical team. Nutritional counseling was provided to support gradual improvement in oral intake, and supportive counseling was incorporated because prolonged vomiting can affect emotional well-being and treatment adherence. Follow-up focused on symptom severity, oral intake, vomiting frequency, weight, and blood pressure. The management strategy was adjusted according to the patient's clinical response, with the intensity of acute treatment decreasing as symptoms improved.

Serial PUQE assessment demonstrated a clear downward trend. The score decreased from 12 at the initial assessment on January 27, 2026, to 11 on January 29, 6 on February 3, and 3 on February 9. The final score indicated substantial resolution of nausea and vomiting compared with the initial moderate symptom burden. The clinical improvement was also reflected by cessation of vomiting and progressively better oral intake. By the final follow-up, the patient's weight had increased to 53 kg. The improvement in both symptom score and nutritional status suggested a favorable short-term response to the comprehensive management.

Table 1. Clinical progression and management of Mrs. H

Date	Clinical status	PUQE score	Main management/follow-up
27 Jan 2026	Recurrent nausea and vomiting, reduced intake, dehydration, weight loss; required active treatment	12	IV rehydration, antiemetic therapy, nutritional and supportive counseling
29 Jan 2026	Symptoms improving but nausea/vomiting persisted	11	Continued monitoring, oral intake support, nutritional counseling
03 Feb 2026	Marked clinical improvement with improved intake	6	Continued monitoring and supportive care
09 Feb 2026	Vomiting ceased, oral intake improved, weight recovery documented	3	Follow-up, antenatal surveillance, education and prevention of recurrence

The serial findings are illustrated in Figure 1. The PUQE score decreased progressively throughout the observation period, with the largest reduction occurring between January 29 and February 3. This pattern was consistent with the patient's clinical recovery after rehydration, antiemetic treatment, nutritional support, and ongoing follow-up.

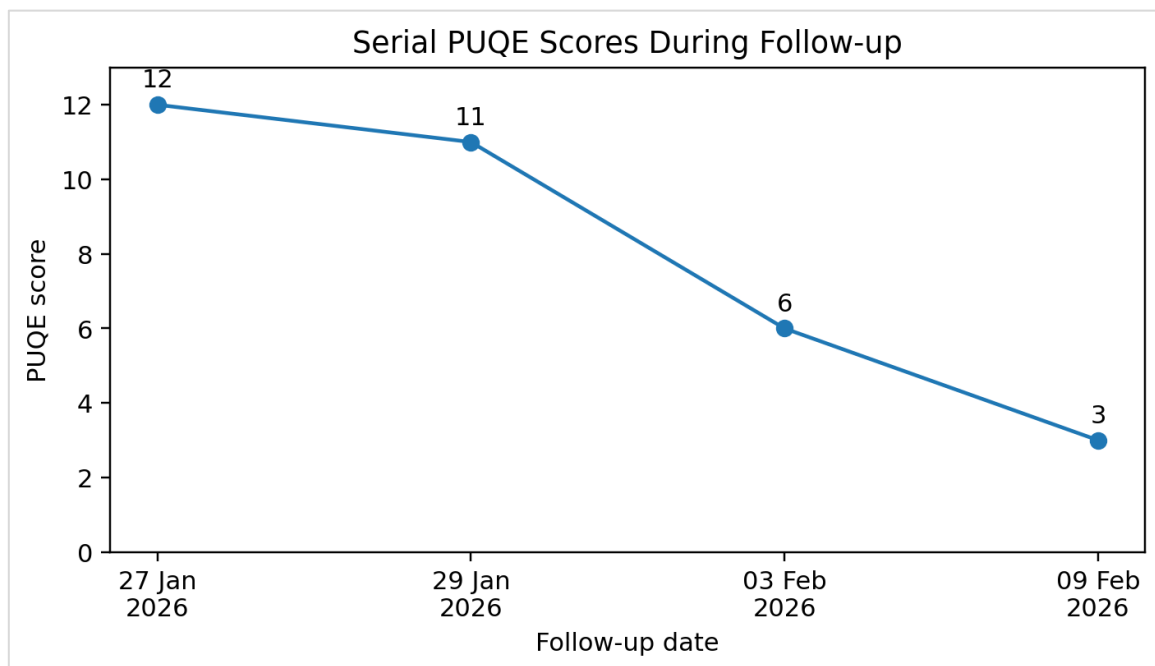


Figure 1. Serial PUQE scores during follow-up

Although the acute HG symptoms resolved, the patient's pregnancy remained classified as very high risk because the underlying obstetric risk factors were unchanged. Therefore, the final management plan emphasized continued antenatal surveillance, monitoring of maternal nutritional and hydration status, early recognition of recurrent nausea or vomiting, and preparation for safe continuation of pregnancy. The case demonstrates that clinical success was not defined solely by cessation of vomiting, but also by restoration of oral intake and weight together with a transition from acute stabilization to ongoing high-risk antenatal care.

DISCUSSION

This case demonstrates the complexity of managing hyperemesis gravidarum in a pregnancy with several concurrent obstetric risk factors. Mrs. H was 37 years old, G5P4A0H3, and had a KSPR score of 22, with grand multiparity, short interpregnancy interval, previous cesarean section, history of IUFD, and breech presentation.

The presence of multiple risk characteristics did not by itself establish a direct causal relationship with HG, but it increased the need for individualized surveillance. Population-based studies have shown that HG is associated with several maternal and pregnancy characteristics, although the strength and direction of associations vary across populations (Nurmi et al., 2020; Pont et al., 2024). In an Indonesian case-control study, parity and pregnancy spacing were among the factors associated with HG, supporting the relevance of these characteristics in the present case (Nurfadillah et al., 2023).

The clinical pattern in this case was compatible with the contemporary concept of HG. Symptoms began in early pregnancy, worsened around the end of the first trimester, impaired oral intake, produced clinically important weight loss, and were accompanied by dehydration. The Windsor consensus emphasizes that HG should be understood as severe nausea and/or vomiting beginning before 16 weeks, associated with inability to eat or drink normally and marked limitation of daily activities, with dehydration considered a contributory sign (Jansen et al., 2021). The patient's initial 7.14% weight reduction and moderate PUQE score of 12 therefore indicated a clinically meaningful condition rather than uncomplicated mild nausea. The observed course is also consistent with the established pattern that symptoms commonly begin early and may peak during the first trimester (Fejzo et al., 2019).

The use of serial PUQE scores strengthened the evaluation of treatment response. PUQE was developed to provide a practical measure of nausea, vomiting, and retching during pregnancy and has demonstrated validity for assessing symptom severity. In the present case, the score fell from 12 to 11, then to 6 and finally to 3. This downward trend was accompanied by cessation of vomiting, improved oral intake, and weight recovery to 53 kg. The concordance between subjective symptom improvement and objective serial scoring supports the usefulness of repeated PUQE assessment in case-based midwifery monitoring. The approach is consistent with the 2024 RCOG guideline, which recommends an objective validated index such as PUQE or HELP to classify the severity of nausea and vomiting in pregnancy (Nelson-Piercy et al., 2024).

The management also illustrates the importance of addressing several clinical problems simultaneously. Intravenous rehydration was appropriate during the acute phase because dehydration and inadequate oral intake were prominent features. ACOG guidance emphasizes early treatment of nausea and vomiting to prevent progression to more severe complications, while the RCOG guideline recommends assessment and treatment according to symptom severity and the patient's ability to maintain hydration and nutrition (Nelson-Piercy et al., 2024). Evidence reviews likewise support a stepwise approach that combines pharmacological and non-pharmacological interventions, although the quality and consistency of evidence differ between treatments. In this case, rehydration and antiemetic therapy were complemented by nutritional counseling and supportive care, followed by continued monitoring rather than abrupt termination of care after the acute symptoms improved.

Nutritional management was particularly important because the patient had experienced weight loss and reduced oral intake. HG may cause protein-calorie malnutrition, micronutrient deficiencies, electrolyte abnormalities, and adverse maternal and fetal consequences when symptoms are prolonged (Elkins et al., 2022). The patient's weight increased to 53 kg by the final follow-up, suggesting improvement in nutritional recovery alongside symptom control. This finding supports the principle that management should monitor both symptom severity and nutritional status. Weight alone, however, should not be interpreted as the only marker of recovery; ongoing assessment of oral intake, hydration, clinical condition, and fetal well-being remains necessary.

Supportive and psychological care also deserves attention. HG can substantially reduce quality of life and is associated with higher anxiety and depression symptoms. More recent evidence continues to show an association between depression and HG, while cautioning that the relationship does not establish causation. In this case, supportive counseling was therefore included as part of comprehensive care. However, because a formal psychological instrument was not documented in the manuscript, the psychological component should be described as supportive counseling rather than as a quantified diagnosis of anxiety or depression.

The use of ginger as a complementary measure may also be considered within supportive care. Systematic reviews indicate that ginger can reduce nausea in pregnancy, although its effect on vomiting is less consistent and optimal dosage remains uncertain. Therefore, ginger should be presented as an adjunctive measure rather than a replacement for rehydration, antiemetic therapy, or nutritional management in a patient with clinically significant HG.

Finally, the improvement in HG did not eliminate the patient's underlying obstetric risk. The decrease in PUQE from 12 to 3 and cessation of vomiting represented successful short-term symptom control, but the pregnancy remained very high risk because maternal age, parity, obstetric history, and other established risk characteristics were unchanged. WHO antenatal care guidance emphasizes repeated maternal and fetal assessment and timely identification of complications rather than focusing only on a single acute episode. Thus, the major clinical lesson from this case is the need for a dynamic care pathway: acute stabilization when dehydration and nutritional

compromise are present, serial assessment of response, restoration of intake and weight, supportive counseling, and continued high-risk antenatal surveillance.

CONCLUSION

Mrs. H's case shows that hyperemesis gravidarum in a very high-risk pregnancy requires integrated and continuously adjusted care. The combination of maternal age ≥ 35 years, grand multiparity, short interpregnancy interval, previous cesarean section, history of IUFD, and other obstetric risk characteristics required close surveillance in addition to treatment of HG. The initial clinical picture included recurrent nausea and vomiting, reduced intake, 7.14% weight loss, dehydration, and a PUQE score of 12. Following intravenous rehydration, antiemetic therapy, nutritional counseling, supportive care, and serial monitoring, the PUQE score decreased to 3, vomiting ceased, oral intake improved, and weight recovered to 53 kg. These findings indicate favorable short-term clinical recovery. Nevertheless, resolution of HG did not remove the underlying very high-risk status; therefore, continued antenatal surveillance, nutritional and hydration monitoring, early recognition of recurrent symptoms, and preparation for safe continuation of pregnancy remain essential.

Acknowledgement

The authors would like to express their sincere appreciation to the respondent. The authors also thank all parties who provided support and assistance during the research process and manuscript preparation.

Competing Interests

All the authors declare that there are no conflicts of interest.

Funding Information

No funds were received for this study.

REFERENCES

1. Jansen LAW, Koot MH, van't Hooft J, et al. (2021). The Windsor definition for hyperemesis gravidarum: A multistakeholder international consensus definition. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 266, 15–22. <https://doi.org/10.1016/j.ejogrb.2021.09.004>
2. Fejzo MS, Trovik J, Grooten IJ, et al. (2019). Nausea and vomiting of pregnancy and hyperemesis gravidarum. *Nature Reviews Disease Primers*, 5, 62. <https://doi.org/10.1038/s41572-019-0110-3>
3. Nelson-Piercy C, Dean C, Shehmar M, Gadsby R, O'Hara M, Hodson K, Nana M, RCOG. (2024). The management of nausea and vomiting of pregnancy and hyperemesis gravidarum (Green-top Guideline No. 69). *BJOG*, 131(7), e1–e30. <https://doi.org/10.1111/1471-0528.17739>
4. Nurmi M, Rautava P, Gissler M, Vahlberg T, Polo-Kantola P. (2020). Incidence and risk factors of hyperemesis gravidarum: A national register-based study in Finland, 2005–2017. *Acta Obstetrica et Gynecologica Scandinavica*, 99(8), 1003–1013. <https://doi.org/10.1111/aogs.13820>
5. Pont S, Bond DM, Shand AW, et al. (2024). Risk factors and recurrence of hyperemesis gravidarum: A population-based record linkage cohort study. *Acta Obstetrica et Gynecologica Scandinavica*, 103(12), 2392–2400. <https://doi.org/10.1111/aogs.14966>
6. Nurfadillah W, Rosyidah R, Rinata E, Purwanti Y. (2023). Risk factor of the incidence of hyperemesis gravidarum: A population-based case-control study. *Indonesian Journal of Nursing and Midwifery*, 11(2), 116–126. [https://doi.org/10.21927/jnki.2023.11\(2\).116-126](https://doi.org/10.21927/jnki.2023.11(2).116-126)
7. Lestari SO, Oktavia DR. (2025). Faktor-faktor yang berhubungan dengan kejadian hiperemesis gravidarum pada ibu hamil. *Borneo Journal of Medical Laboratory Technology*, 7(2), 744–751. <https://doi.org/10.33084/bjmlt.v7i2.9978>
8. Geovani W. (2024). Hubungan usia dan paritas ibu dengan kejadian hiperemesis gravidarum di Rumah Sakit Umum Keliat. *Journal of Midwifery Sempena Negeri*, 4(2), 56–62. <https://doi.org/10.56313/6d0h1g09>
9. Salsa Bella SC, Idris SBM, Selomo PAM. (2025). Prevalence of hyperemesis gravidarum based on age, parity, and severity. *Jurnal Indonesia Sosial Sains*, 6(8), 2514–2519. <https://doi.org/10.59141/jiss.v6i8.1806>

10. Hassen TA, Harris ML, Shifti DM, et al. (2024). Effects of short inter-pregnancy/birth interval on adverse perinatal outcomes in Asia-Pacific region: A systematic review and meta-analysis. *PLOS ONE*, 19(7), e0307942. <https://doi.org/10.1371/journal.pone.0307942>
11. Elkins JR, Oxentenko AS, Nguyen LAB. (2022). Hyperemesis gravidarum and nutritional support. *American Journal of Gastroenterology*, 117(10S), 2–9. <https://doi.org/10.14309/ajg.0000000000001957>
12. Pamungkas ADA, Adimayanti E. (2025). Manajemen mual dan muntah pada primigravida dengan hiperemesis gravidarum. *Jurnal Keperawatan Berbudaya Sehat*, 3(2), 92–99. <https://doi.org/10.35473/jkbs.v3i2.3432>