GENIUS JOURNAL
general nursing science journal
e-ISSN: 2723-7729
Vol. 03 No. 01 PP. 87-92 E-ISSN 2723-7729 Prefix DOI: 10.56359/gj

# Comprehensive Management of Pregnancy with Anaemia

Aulia Ridla Fauzi[1], Rosidah Solihah[1], Resna Litasari[1], Fitria Andini[1], Neli Sunarni[1], Sri Utami Asmarani[1], Hani Septiani[1], Dini Ariani[1]
[1]*STIKes Muhammadiyah Ciamis, Ciamis, Indonesia*

*Correspondence author: Aulia Ridla Fauzi*
*Email: auliaridlafauzi@gmail.com*
*address : Jl. K.H Ahmad Dahlan No. 20, Ciamis, West Java, Indonesia, +628111022311*
*Submitted: 7 December 2021, Revised: 30 December 2021, Accepted: 6 January 2022, Published: 15 July 2022*
*DOI: doi.org/10.56359/gj.v3i1.42*


**ABSTRACT**

**Objective**: The aim of this case study is to carry out comprehensive management for pregnant women with mild anemia.
**Method**: The design is a case study design with comprehensive care. This case study uses an analytical descriptive method, with the main objective of exploring the problem, providing an overview of the case, and analyzing more deeply midwifery care according to the client's needs.
**Results**: Comprehensive care carried out for pregnant women with anemia was successfully carried out by increasing HB levels and giving birth without complications, as well as the condition of the newborn in good condition.
**Conclusion**: Oral iron (Fe) supplementation is the standard of care in obstetric practice in pregnancy. The increase in hemoglobin levels in pregnant women with mild anemia conditions can be increased by providing correct and effective information, monitoring Fe consumption regularly by midwives, nurses, and health workers for 30 days, and providing information on danger signs during delivery until the baby's condition is born.

**Keywords:** anemia, iron deficiency, pregnancy

## Introduction

Comprehensive midwifery care is comprehensive care provided by midwives starting from pregnancy, childbirth, and the newborn. So, delivery can take place safely and babies are born safe and healthy until the puerperium (D. A. Ningsih, 2017). The process of pregnancy, childbirth and postpartum can cause complications if not detected early. This is one of the reasons for the importance of maternal and child health efforts as a priority for health development in Indonesia (Kemenkes, 2018). One of the targets of the SDGs is to reduce maternal mortality, one of the

problems with maternal morbidity is the prevalence of anaemia in pregnant women at 41.8%. Meanwhile, the Asian region, the highest in the world at 48.2% (WHO, 2019). Data in 2018 the prevalence of anemia in pregnancy was 48.9%, West Java had 11,957 cases of pregnant women with anemia (Riskesdas, 2019).

Most pregnant women who lack iron reserves can cause iron-deficiency anaemia. The amount of Fe consumed by pregnant women during pregnancy is related to the incidence of anaemia in pregnancy (Darwanty J, 2018). Maternal iron deficiency anaemia can cause impaired physical performance, difficulty breathing, fatigue, palpitations, sleep difficulties, decreased cognitive and behavioural performance and postpartum depression. Anaemia in pregnancy is associated with an increased risk of preeclampsia, postpartum haemorrhage, infection, and length of hospitalization (Cao C, 2013; Carlo G, Renzo D, 2015).

Whereas, in fetuses and babies born, iron deficiency anaemia can cause stunted fetal growth, low birth weight, and preterm birth. Iron is also beneficial for metabolism and nerve function. Children born with iron deficiency are at risk for difficulties in cognitive, social-emotional, adaptive function, and motor development (NICE, 2008; Tran K, 2019). The duty of a Midwife in Law No. 4 concerning Midwifery in Articles 49-50 is to provide comprehensive care for mother & child. It is also stated that the health standard for pregnant women for the prevention of iron deficiency anaemia is the provision of 90 tablets of blood supplement (*UU RI No. 4 Tahun,* 2019). Based on the description above, the authors are interested in making a case study on the management of anaemia in pregnancy with comprehensive care.

**Objective**

The aim of this case study is to carry out comprehensive midwifery care for pregnant women with mild anaemia with a midwifery care management approach, starting from assessing basic data, interpreting data, identifying diagnoses or potential problems, determining the need for immediate action, developing a plan of care, and administering care, as well as evaluation.

**Method**

The design is a case study design with a comprehensive approach to midwifery care. This case study uses an analytical descriptive method, with the main objective of exploring the problem, providing an overview of the case and analyzing more deeply midwifery care according to the client's needs.

The case study framework carried out can be seen below:

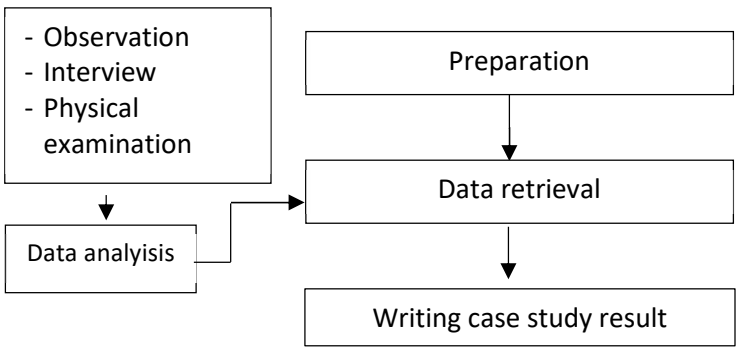


Figure 1. Flowchart

The subjects in this study were of pregnant women with anaemia who were willing to be the subject of a comprehensive care assessment. The exclusion criteria in this case study were the subject who suddenly resigned as a respondent, as well as other conditions that made it impossible to become a respondent. The time used by the author is five months (December 2021 – April 2022) from preparation to write the case study results. Data collection includes interviews, observations, physical examinations and documentation while still using ethics in research (informed consent, anonymity, confidentiality, beneficence, voluntary, autonomy, justice). The tools used in this case study are pregnancy assessment equipment sets, normal delivery equipment sets, newborn examination equipment sets, and HB examination sets. After the data is collected, the validity of the data is tested, and after that write the results of the case studies.

**Results**

***Basic Data Assesment***

The client named Mrs A is 32 yo., the client has been studied since February 2022 by exploring the subjective data and the client says that she feels weak, is 39 weeks pregnant, is a second pregnancy, and the first child is 10 years old, has never had a miscarriage, there is no past pregnancy history complications, history of labour and then no complications and spontaneous delivery assisted by a midwife. The results of the HB examination in November 2021 are 9.2 g/dl.

Objective data obtained from physical examination and laboratory examination as supporting data. Vital signs Mrs A, the results of vital signs are within normal limits, pale conjunctiva, white sclera, no enlargement of the thyroid gland, there is little colostrum expenditure. Uterine fundus height: 32 cm, back on the right side of the mother's abdomen, head presentation, convergent, fetal heart rate: 135x/minute, oedema (-), varices (-), patellar reflex +/+, HB: 9 gr/dl, urine protein (-), urine glucose (-).

Mrs A came back on March 24, 2022, at 15.30 WIB, with complaints of heartburn and mucus mixed with blood. The results of the examination were soft thickness, servix opening 3 cm, amniotic fluid (+), head on Hodge I, HB 11 gr%. At 18.30 WIB the contractions got stronger 5x10'50", the portio was not palpable, the opening was 10 cm, the membranes (-) spontaneously, the head of the hodge IV.

A baby born on March 24, 2022 at 19.10 WIB spontaneously cries loudly, breathing: 50 x/minute, heart rate 130 x/minute, temperature $36.8^0$C, weight 2500 grams, baby's height 48 cm, head circumference 31 cm, chest circumference 32 cm, mid upper arm circumference 11 cm, no head birth trauma, labia majora covering labia minora, urethral and vaginal openings, perforated anus, 7 (seven) primitive reflexes of newborn (+).

***Data Interpretation***

Based on the assessment of subjective and objective data, the client's initial G2P1A0 was 39 weeks with mild anaemia, a single live fetus. Meanwhile, when the client gave birth, the data became P2A0 40 weeks of spontaneous labour.

***Potential Diagnosis***

Mild anaemia in pregnancy, especially in the third trimester, causes complications in the form of bleeding during labour and asphyxia in newborns.

***Immediate Treatment***

Handling of pregnancy with mild anaemia is by giving Fe 60 mg tablets 1 x 1 for 30 days, nutritional intake in the form of balanced nutrition, adequate rest patterns, as well as care and monitoring carried out by midwives.

***Care Plan***

The planning of care carried out is to provide informal counselling and education about danger signs and discomfort in the third trimester, compliance with blood and nutritional supplements with a balanced nutritional preganancy, and encourage clients to get adequate rest.

***Comprehensive Care Management***

The focus of this care management is to comprehensively improve the condition of mild anaemia in pregnancy by increasing the client's haemoglobin level. The care provided includes informing the client's condition during the assessment/examination process as an effort to establish information and awareness that the client's condition is not within normal limits. Providing counselling, information, and education related to the danger signs and discomforts of 3rd-trimester pregnancy, fulfilling balanced nutritional needs, and adequate rest patterns.

***Data Analysis***

Table 1. Data Analysis

| Data Analysis | Problem |
|---|---|
| Subjective Data:<br>The client says he is weak and feels tired in his pregnancy condition<br>Objective Data:<br>1. General Condition: Sickness<br>2. GCS: composmentis<br>3. Vital Sign<br>Sphyg 110/70 mmHg, Pulls 22 x/menit, Resp 81x/menit, Temp. 36,8°C, HB 9 gr/dl | Moderate Anemia |

***Evaluation***

This comprehensive care process lasts for 5 (five) months, with intensive assessment and monitoring of the complicated condition of the 3rd trimester of pregnancy, the client gets good results. The formation of an understanding of the dangers of anaemia in pregnancy has succeeded in making clients obedient to the consumption of the given Fe tablets. Thus, the condition of low haemoglobin levels was successfully raised by 1% and the delivery process proceeded normally without any potential problems.

**Discussion**

The need for iron (Fe) which is needed every day to replace losses from the body and for growth varies, the greatest need is in pregnant women, adolescents and menstruating women. During pregnancy the average iron requirement is about 1000 mg, approximately 500 mg is needed for the increase in red blood cells and about 300 mg is transported to the fetus, especially in the last 12 weeks of pregnancy. The remaining 200 mg is needed to compensate for losses through sweat, faeces, and urine (Sharma JB, 2010). Healthy women who are not pregnant have

iron stores with an average HB level dropping from 13.3 g/dl to 11 g/dl in early pregnancy. Increased iron requirements occur in the second trimester with an average of 6-7 mg/day, in most women (Srivastava R, et. al., 2019).

The complaint submitted by the client when he first came was feeling weak and tired, the complaint was in line with research Kondi (2017), pregnant women with anaemia have complaints of weakness, drowsiness, dizziness, tiredness, malaise, headache, nausea and vomiting. This condition was accompanied by the results of supporting examinations in the form of a haemoglobin test which was obtained at 9 g/dl. An HB level of 9 g/dl is a mild category, as WHO classifies anaemia into 3 categories, namely normal ($\geqslant$11 g/dl), mild anaemia (8-9 g/dl) and severe anaemia (<8 g/dl) (Irianto, 2019). There were no other complicating conditions such as urine protein and urine glucose values, both of which were within normal limits.

The care provided to pregnant clients with mild anaemia is based on research results Umi Rommayati et. al., (2017) increase in HB levels of pregnant women after being given 60 mg/day Fe tablets for 1 month above 1%. The government has carried out a program that supports all pregnant women throughout Indonesia, the program that has been carried out is that all pregnant women must consume 90 tablets of Fe during pregnancy (UU RI No. 4, 2019). The goal of iron supplementation is to maintain iron stores to prevent true anaemia, and not to increase haemoglobin levels. Lack of iron supplementation is associated with an increase in moderate and severe iron deficiency, because of the increased need for iron during pregnancy, every pregnant woman should receive additional iron supplements, and this can be used as a strategy to prevent anaemia (Apreila & Nugraha, 2021; Asmara et al., 2022; Rohimah, 2021).

Other care provided besides iron (Fe) therapy is the provision of balanced nutrition, a well-balanced diet is very important to ensure pregnant women receive enough iron. The most easily absorbed iron comes from red meat, fish and poultry. However, there are vegetarian options for green leafy vegetables such as spinach. The most common side effects of taking iron tablets are nausea, bloating, and constipation. Response to treatment after 2-4 weeks pregnant women will undergo a blood test to check whether the iron tablets are working. If there is a significant change, the pregnant woman will continue to take iron tablets for another 3 months, to help increase iron stores in the body (Colman K and Pavord S., 2017).

## Conclusion

Oral iron (Fe) supplementation is the standard of care in obstetric practice in pregnancy. Oral iron therapy is influenced by many factors such as limited absorption, non-adherence and side effects. The results of this care show that the increase in haemoglobin levels in pregnant women with mild anaemia conditions can be increased by providing correct and effective information, monitoring Fe consumption regularly by midwives for 30 days, and providing information on danger signs during delivery until the baby's condition is born.

## References


1. Aprelia, V., & Nugraha, Y. (2021). Edukasi mengenai Penyakit Anemia pada Kalangan Remaja dengan Penyuluhan Kesehatan di SMA Negeri 2 Banjar. *Kolaborasi Jurnal Pengabdian Masyarakat*, *1*(1), 22–31.
2. Asmara, A. N., Asmarani, A. Z., & Pamungkas, D. M. T. (2022). Penyuluhan Kesehatan untuk Meningkatkan Pengetahuan tentang Anemia pada Remaja. *Kolaborasi Jurnal Pengabdian Masyarakat*, *2*(3), 254–261.

3. Cao C, O. K. (2013). Pregnancy and iron homeostasis: An update. *Nutr Rev*, *1(1):*, 35–51.
4. Carlo G, Renzo D, G. I. (2015). Iron deficiency anemia in pregnancy. *Womens Heal.*, *11(6)*, 891–900.
5. Colman K and Pavord S. (2017). Iron Deficiency Anaemia in Pregnancy Information for Patients. *Oxford University Hospitals*.
6. D. A. Ningsih. (2017). Continuity Of Care Kebidanan. Oksitosin. *Jurnal Ilmiah Kebidanan*, *4*, 67–77.
7. Irianto. (2019). *Klasifikasi Anemia dalam kehamilan*. Bandung: Alfabeta.
8. J, D. (2018). Hubungan Konsumsi Fe Terhadap Kejadian Anemia pada Ibu Hamil di Kabupaten Karawang. *Jurnal Kebidanan*, *7*(1).
9. Kementerian Kesehatan dan Kementerian Dalam Negeri. (2018). Profil Kesehatan Indonesia.
10. Kondi. (2017). Faktor-faktor yang mempengaruhi anemia pada ibu hamil di Puskesmas Paddiwatu Kabupaten Sumba Barat. *CHMK Midwifery Scientific Journal*, 28-42.
11. NICE. (2008). Antenatal Care, routine care for the healthy pregnant woman.
12. Riskesdas, K. (2019). Survei Demografi dan Kesehatan Indonesia.
13. Rohimah, R. L. (2021). Edukasi kesehatan tentang penyakit anemia dalam keluarga. *Kolaborasi Jurnal Pengabdian Masyarakat*, *1*(1).
14. Sharma JB, S. M. (2010). Anemia in Pregnancy. *JIMSA*, *4*(23).
15. Srivastava R, Kant S, Singh AK,Saxena R, Yadav K, P. C. (2019). Effect of Iron and Folid Acid Tablet Versus Capsule Formulation on Treatment Compliance and Iron Status Among Pregnant Women: A randomized Controlled Trial. *Journal Family Med Prim Care*, *8*(2), 378–384.
16. Tran K, M. S. (2019). *Screening and treatment of obstetric anemia: A review of clinical effectiveness, cost-effectiveness, and guidelines*.
17. Umi Rommayati Keswara, Y. H. (2017). Efektivitas Pemberian Tablet Fe Terhadap Peningkatan Kadar HB Pada Ibu Hamil. *Umi Rommayati Keswara, Y. H.*, 17–21.
18. UU Republik Indonesia No. 4 Tahun 2019 tentang Kebidanan. (2019), 1–32.
19. WHO. (2019). Indikator Kesehatan SDGs Di Indonesia.