

The Effect of Consuming Dates on Increasing Hemoglobin Levels in Pregnant Women

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ABSTRACT

Introduction: Anemia is one of the causes of antepartum or postpartum bleeding. Anemia in pregnant women occurs if the hemoglobin level in the blood is <11 gr/dl in the first and third trimesters of pregnancy, and if it is <10.5 gr/dl in the second trimester of pregnancy. The impacts that will occur if a pregnant woman is anemic are birth with LBW, prematurity, neonatal death, neonatal anemia, birth by cesarean section, mental development barriers, and low APGAR scores. The incidence of anemia in pregnant women in Indonesia is still relatively high, namely 48.9%. **Objective:** The aim of this research is to examine further the effect of consuming dates on increasing hemoglobin levels in pregnant women. **Method:** The method of this research is a review of articles regarding consumption of dates on increasing hemoglobin in pregnant women. Search for articles in English or Indonesian that are accessed by internet searches from databases, including Pubmed and Google Scholar with the keywords dates palm, anemia pregnant. The search process that met the requirements according to the inclusion and exclusion criteria was 5 articles. **Result:** Consuming dates for pregnant women with anemia can increase hemoglobin levels. The average results of hemoglobin levels showed an increase after consuming dates. **Conclusion:** Consuming dates for pregnant women can increase hemoglobin levels. Pregnant women should regularly consume dates.

Keywords: dates, hemoglobin, pregnant women

Introduction

The Maternal Mortality Rate (MMR) is very high. Around 287,000 women died during and after pregnancy and childbirth in 2020. Nearly 95% of all maternal deaths occurred in low and lower middle income countries. Every day in 2020 nearly 800 women died from preventable causes related to pregnancy and childbirth. Maternal death occurs almost every 2 minutes. Between 2000-2020, the maternal mortality ratio fell by around 34% worldwide. The main complications that cause almost 75% of all maternal deaths are severe bleeding (bleeding after delivery), infection (after delivery), high blood pressure during pregnancy (preeclampsia and eclampsia), birth complications, and unsafe abortion (Maternal Mortality, 2023).

According to data from the Inter-Census Population Survey (SUPAS), MMR in Indonesia in 2015 was around 305 per 100,000 live births. The causes of maternal death were 33.07% of hypertension, 27.03% of obstetric bleeding, 15.7% of non-obstetric complications, 12.04% of other obstetric complications, 6.06% of infection during pregnancy and 4.81% of other causes. (Indonesian Ministry of Health Directorate General of Public Health, 2019).

Efforts that can be made to reduce MMR are when pregnant women are closely monitored, namely by carrying out timely and complete Antenatal Care (ANC) for pregnant women, including giving Fe (calcium) tablets to mothers and monitoring them through maternal and child health surveillance (MCH) officers.

Fe tablets or blood supplement tablets are very important for mothers to consume during pregnancy. In accordance with midwifery service standards, mothers must consume 90 blood supplement tablets during pregnancy. By consuming blood supplement tablets, it will prevent anemia in pregnant women (Indonesian Ministry of Health, 2023).

Anemia is one of the causes of antepartum or postpartum bleeding. Anemia in pregnant women occurs if the hemoglobin level in the blood is <11 gr/dl in the first and third trimesters of pregnancy, and if it is <10.5 gr/dl in the second trimester of pregnancy. The impacts that will occur if a pregnant woman is anemic are birth with LBW, prematurity, neonatal death, neonatal anemia, birth by cesarean section, mental development barriers, and low APGAR scores. (Lilik Hidayanti, 2020). The incidence of anemia in pregnant women in Indonesia is still relatively high, namely 48.9% (Ministry of Health RRI, 2019).

One of the efforts made to prevent anemia in pregnant women, apart from consuming blood supplement tablets, is also by supplementing with balanced nutrition, such as carbohydrates, protein, vegetables and fruit. Fruits that are rich in iron can be obtained from dates. Research shows that dates are rich in minerals, especially calcium, potassium, copper, selenium, iron, magnesium, zinc and manganese. These micronutrients are essential for the role of natural functions in the human body. One of them is that the iron contained in it plays a role in fighting physical weakness. As many as 4-60% of existing date palm varieties contain iron. Dates are very beneficial for the health of pregnant and breastfeeding women (Nora Abdullah AlFaris, Jozaa Zaidan AlTamim, Lujain Abdulaziz AlMousa & AlGhamidi, 2022). Based on the description above, this article was prepared to examine the effect of consuming dates on increasing hemoglobin in pregnant women.

Objective

The aim of this research is to examine further the effect of consuming dates on increasing hemoglobin levels in pregnant women.

Method

This research method is a review of articles regarding consumption of dates on increasing hemoglobin in pregnant women. The inclusion criteria used were pregnant women who consumed dates as additional iron. Exclusion criteria were articles that were only abstracts, articles that were not full text. Search for articles in English or Indonesian that are accessed by internet searches from databases, including Pubmed and Google Scholar with the keywords dates palm, anemia pregnant. Articles that met the inclusion criteria were systematically collected and examined. The literature search looks at the latest article publications (2019-2024). The search process that met the requirements according to the inclusion and exclusion criteria was 5 articles.

Result

Based on the database search carried out, 11 articles were found that matched the theme. After screening, 5 were found in accordance with the inclusion and exclusion criteria, then a review would be carried out. The results of the literature review analysis can be seen in the following table:

Table 1. Literature Data Extraction

No	Writer	Title	Objective	Method	Result
1	Risza Choirunnisa, Retno Widowati, Astrid Estiyana Putri	The effect of Dates Consumption on Increased Hemoglobin Levels in Third Trimester Pregnant Women at BPM "E" Serang	To determine the effect of consuming dates on increasing hemoglobin levels in third trimester pregnant women.	Quasi-experiment with nonequivalent control group design.	16 respondents from the experimental group found that before consuming dates the Hb of pregnant women was 10.4 gr/dl, after consuming dates the Hb of pregnant women was 12.2 gr/dl. So there is an increase of 1.8 gr/dl. The results of the Paired T-test, Pvalue in the experimental group was 0.031 ($P < \alpha$) so it can be concluded that there is an effect of consuming 7 dates every day for 14 days on increasing hemoglobin levels in third trimester pregnant women.
2	Wira Maria Ginting, Desri Meriahta Br. Girsang, Keleng Ate Ginting, Dewi Mahdalena Br. Karo, Reni Aprinawaty Sirait	Effect of Giving Dates on Increasing Hemoglobin Levels in Pregnant Women with Anemia	To determine the effect of giving dates on increasing hemoglobin levels in pregnant women with anemia.	Quantitative research design with quasi experimental type, one group test.	Before consuming dates, 44 respondents were found to have low Hb, after consuming dates, 44 respondents experienced an increase in Hb levels. The results of the Paired t-test obtained a Pvalue of 0.000 ($P < \alpha$), it can be

No	Writer	Title	Objective	Method	Result
3	Amyenchin Ega Pradwita, Yona Desni Sagita, Yetty Dwi Fara, Hellen Febriyanti	The Effect of Commsumption of Sukkari Dates on The Hb Levels of Pregnant Women at Term III in The Working Area of The Tanjung Harapan Health Center East Lampung Regency	To determine the effect of consuming sukkari dates on the Hb levels of TM III pregnant women in the Tanjung Harapan Health Center Working Area, East Lampung Regency.	This type of research is quantitative with a pre- experimental research design with a one group pretest - posttest design approach.	concluded that there is an effect of giving dates on increasing hemoglobin levels in pregnant women with anemia. Of the 19 respondents, the average Hb level before consuming sukkari dates was Hb 9.8 gr/dl (minimum Hb 9.2 gr/dl, maximum Hb 10.3 gr/dl, after consuming sukkari dates there was an increase in the average Hb level namely 10.7 gr/dl (minimum Hb 10.1 gr/dl, maximum Hb 11.3 gr/dl). The statistical test results showed that the Pvalue was 0.000 ($P<\alpha$), meaning that there was an influence of consumption of sukkari dates on the Hb levels of TM III pregnant women.
4	Wening Eka Cahya, Ardhita Listya Fitriani, Fhandy Aldy Mandaty, Rizqitha	Effectiveness of Dates and Beet Fruit on Hemoglobin Levels in Third Trimester Pregnant Women in the Karangawen II Health Center Area, Demak Regency	To determine the effectiveness of dates and beets on hemoglobin levels in second trimester pregnant women at the Karangawen II Health Center, Demak Regency.	This type of research is a quasi- experiment. The research design used was a two group pre- test-post-test design.	18 people in the experimental group consumed 3x2 dates per day for 7 days. It was found that before consuming dates the minimum Hb was 9.0 gr/dl, the maximum Hb was 11.0 gr/dl, after consuming the dates the minimum Hb was 10.0 gr/dl, the maximum Hb 12.4 gr/dl. The statistical test results obtained a Pvalue of 0.000 ($P<\alpha$), meaning that there was a significant difference in the two groups. It can be concluded that consuming dates is effective in helping

No	Writer	Title	Objective	Method	Result
5	Sugita, Kuswati	The Effect of Consuming Dates on Increasing Hemoglobin Levels in Third Trimester Pregnant Women	To determine the effect of consuming dates on increasing hemoglobin levels in third trimester pregnant women.	This type of research is quasi-experimental with a non-equivalent control group design, namely by looking at the results of increasing hemoglobin levels before and after the treatment of consuming dates.	increase Hb levels in third trimester pregnant women. 15 people in the experimental group found that before consuming dates, the minimum Hb was 9.8 gr/dl, the maximum Hb was 13.3 gr/dl. After consuming dates, the minimum Hb is 10.9 gr/dl, the maximum Hb is 14.0 gr/dl. The results of the Wilcoxon signed Rank Test showed that there was a significant difference in HB levels before and after consuming dates. Pvalue 0.002 ($P < \alpha$), meaning that there is an effect of consuming dates on increasing hemoglobin levels in third trimester pregnant women.

Discussion

The need for iron during pregnancy increases because it is used for the formation of cells and brain tissue in the fetus. Iron is an important element in the formation of hemoglobin in red blood cells. Hemoglobin functions to bind oxygen and deliver oxygen to all body tissue cells, including muscles and the brain. Pregnant women lack hemoglobin, so they are said to have anemia. Pregnant women are said to be anemic if their Hb level is less than 11 gr/dl.

There are various ways to prevent anemia in pregnant women, including pharmacological or non-pharmacological methods. Pharmacological treatment involves giving blood supplement tablets 60 mg/day, during pregnancy consuming 90 blood supplement tablets (Indonesian Ministry of Health, 2020). Non-pharmacologically, this can be done by consuming foods rich in protein obtained from animals and plants. Meat, liver, eggs are good sources of protein for the body. Green vegetables, fruits such as dates are rich in iron and other substances needed to form red blood cells and hemoglobin (Dwene Nur Gianing, 2023; Nora Abdullah AlFaris, Jozaa Zaidan AlTamim, Lujain Abdulaziz AlMousa & AlGhamidi, 2022).

As a result of the literature review, all articles explain the results of research on consuming dates for pregnant women with anemia, which can increase hemoglobin levels. The average results of hemoglobin levels showed an increase after consuming dates (Amyenchin Ega Pradwita, Yona Desni Sagita, Yetty Dwi Fara, 2024; Risza Choirunnisa, Retno

Widowati, 2021; Sugita, 2020; Wening Eka Cahya, Ardhita Listya Fitriani, Fhandy Aldy Mandaty, 2021; Wira Maria Ginting, Desri Meriahta Br. Girsang, Keleng Ate Ginting, Dewi Mahdalena Br.. Several studies state that the time for pregnant women to consume dates is 3-7 dates for 7-14 days.(Risza Choirunnisa, Retno Widowati, 2021; Wening Eka Cahya, Ardhita Listya Fitriani, Fhandy Aldy Mandaty, 2021). Dates can be used as an alternative to meet iron needs during pregnancy by consuming them regularly.

Conclusion

The overall results of the study show that consuming dates is effective in increasing hemoglobin levels in pregnant women.

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