



## Effect of banana blossom vegetables for speed up recovery of perineal wounds

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### ABSTRAK

**Latar Belakang:** Proses persalinan melalui jalan lahir memiliki resiko mengalami robekan perineum, robekan perineum dapat terjadi secara spontan maupun robekan melalui tindakan episiotomy. Adanya luka perineum dapat menjadi salah satu faktor predisposisi terjadinya infeksi pada masa nifas. Berdasarkan Profil Kesehatan Indonesia Tahun 2018 luka post-partum masih menjadi kasus umum penyebab infeksi mencapai angka sebesar 80-90%. Terapi komplementer menjadi solusi yang tepat untuk mengatasi masalah kesehatan salah satu jenis keanekaragaman hayati yang dapat digunakan sebagai terapi herbal untuk mempercepat proses penyembuhan luka perineum adalah jantung pisang yang mengandung zat besi yang diperlukan untuk hidrosilasi proline, lisin, vitamin, flavonoid, dan protein dipercaya memiliki efek antioksidan yang sangat diperlukan dalam proses penyembuhan luka

**Tujuan:** Penelitian ini bertujuan untuk mengetahui efektivitas konsumsi sayur jantung pisang untuk mempercepat penyembuhan luka perineum

**Metode:** Penelitian ini merupakan penelitian Quasi eksperimen dengan rancangan Posttest Only Control Group kemudian dianalisis menggunakan uji non parametric yaitu uji mann whitney dan tingkat kemaknaan 0,05, untuk melihat perbedaan waktu penyembuhan luka perineum antara kelompok kontrol dan kelompok eksperimen

**Hasil:** Berdasarkan hasil uji statistik menggunakan Mann whitney U-Test diperoleh p value  $0,000 < 0,05$  ( $\alpha$ ) yang menunjukkan bahwa H1 diterima dan H0 ditolak artinya terdapat perbedaan lama penyembuhan luka perineum antara responden yang mengkonsumsi sayur jantung pisang dan responden yang tidak mengkonsumsi sayur jantung pisang

**Kesimpulan:** Jantung pisang memiliki kandungan antioksidan yang tinggi yang membuat proses penyatuan jaringan pada kedua sisi luka akibat robekan berlangsung lebih cepat. Dengan adanya hasil penelitian ini diharapkan seluruh ibu nifas yang mengalami robekan perineum dapat mengkonsumsi sayur jantung pisang secara continue hingga luka perineum sembuh

**KATA KUNCI:** sayur jantung pisang; waktu penyembuhan; luka perineum

### ABSTRACT

**Background:** The process of delivery through the birth canal has a risk of experiencing perineal tears, perineal tears can occur spontaneously or tear through episiotomy. The presence of perineal wounds can be one of the predisposing factors for infection during the puerperium. Based on the Indonesian Health Profile in 2018, post-partum wounds are still a common cause of infection, reaching 80-90%. Complementary therapy is the right solution

to overcome health problems. One type of biodiversity that can be used as herbal therapy to speed up recovery process of perineal wounds is banana blossom which contains iron which is needed for hydroxylation of proline, lysine, vitamins, flavonoids, and proteins. antioxidant effect which is indispensable in the wound healing process

**Objectives:** This study aims to determine the effectiveness of consuming banana flower vegetables to accelerate perineal wound healing.

**Methods:** This research is a quasi-experimental study with a Posttest Only Control Group design and then analyzed using a non-parametric test, namely the Mann Whitney test and a significance level of 0.05, to see the difference in perineal wound healing time between the control group and the experimental group

**Results:** Based on the results of statistical tests using the Mann Whitney U-Test, a p value of  $0.000 < 0.05$  ( $\alpha$ ) was obtained which indicated that H1 was accepted and H0 was rejected, meaning that there was a difference in the duration of perineal wound healing between respondents who consumed banana flower vegetables and respondents who did not consume banana heart

**Conclusions:** Banana flower has a high antioxidant content which makes the process of joining the tissues on both sides of the wound due to tearing to take place more quickly. With the results of this study, it is hoped that all postpartum women who experience perineal tears can continue to consume banana flower vegetables until the perineal wound heals.

**KEYWORD :** banana heart vegetable; healing time; perineal wound

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## INTRODUCTION

The process of childbirth through the birth canal has a risk of experiencing a perineal tear, because the perineum is the muscle, skin, and tissue that is between the genitals and the anus, perineal injuries are things that often occur during childbirth(1). Perineal tears can occur spontaneously or tear through an episiotomy. Perineal tears often occur in primiparous deliveries but can also occur in subsequent deliveries. The presence of perineal wounds can be one of the predisposing factors for infection during the puerperium(2)including decreased quality of birthing experience, persistent postpartum perineal pain and sexual dysfunction, as well as pelvic floor pathology. Many women fear such perineal trauma. In fact, obstetrical perineal damage and its long term consequences are some of the greatest concerns of patients.

Even though evidencebased outcomes show antenatal perineal massage (APM. Based on the Indonesian Health Profile in 2018, post-partum wounds are still a common cause of infection, reaching 80-90% (3). The incidence of post partum infection can increase maternal morbidity and mortality which can affect the number of MMR in Indonesia. Based on the results of the 2017 Inter-Census Population Survey (SUPAS) MMR is at the point of 305 maternal deaths per 100,000 live births(4).

Perineal rupture is caused by 2 main factors, namely maternal factors which include rigid perineal conditions, maternal parity, the presence of scar tissue in the perineum and the wrong way of pushing during the delivery process(5). Furthermore, infant factors can also cause perineal rupture including macrosomia, shoulder dystocia, fetal malposition and fetal distress (6).

Perineal wound healing is influenced by the area of the wound on the perineum, hygiene, mobilization, maternal health conditions and nutrition consumed by the mother (7).

Complementary therapies are currently the right solution to overcome health problems, because they do not have side effects like those caused after consuming conventional drugs(8). There are several suggestions for complementary therapies to speed up recovery process of perineal wounds, among others, by applying warm and cold compresses, vulva hygiene with betel leaf stew, consuming egg whites, consuming catfish and taking zinc supplements(9).

Indonesia is known to have biodiversity, which has great potential to provide natural medicine, considering that many medicinal plants grow well. Since the first, the Indonesian people have known medicinal plants and use them to maintain health and treat disease(10). The use of medicinal plants is obtained based on empirical experience handed down from our ancestors. An overview of recent research conducted around the world shows that in developing countries nearly 80% of people use complementary therapeutic methods, by consuming herbal plants to overcome health problems(11).

One type of biodiversity that can be used as herbal therapy to speed up recovery process of perineal wounds is banana buds, besides the relatively cheap price, banana flowers are also easy to obtain, especially in the village of Klampar. Banana blossom contains iron which is needed for the hydroxylation of proline and lysine which can help the wound healing process. In addition, the content of vitamins, flavonoids, and protein is believed to have an antioxidant effect which is indispensable in the wound healing process(12) or pre and post test design. The experiment was conducted in Local Government Clinic of Srikuncoro starting on 16–29 June 2012. Methods: The population are 60 post partum mothers <40 days breastfeeding in Local Government Clinic

of Srikuncoro region, with a sample of 20 people. Results: From the results of this study found that the intensity of the average frequency of milk before consumption banana with seeds blossom is 5.7 times. After taking banana with seeds blossom, increased to 9.75 times. The difference in average increase in milk production was 5.458 to 0.000 sig. Because of <0.05, which means that Ha received banana with seeds blossom consumption increased breast milk production. Required more intensive counseling to people that banana with seeds blossom consumption can effect breast milk production. It is hoped that other researchers could continue this research with other factor such as physiology problem, the early breastfeeding (IMD). This study aims to determine the effectiveness of consumption of banana blossom vegetables to speed up recovery of perineal wounds. This research is in accordance with the scheme of focus areas for the development of complementary therapies for herbal medicines which emphasizes the technology of independence of medicinal raw materials.

## **MATERIALS AND METHODS**

This research is a quasi-experimental research with Posttest Only Control Group design. The sample in this study was divided into two groups, namely the control group and the intervention group who were given treatment in the form of consumption of banana blossom vegetables to speed up recovery process of perineal wounds.

This research will be carried out in Juncancang Village, Pamekasan District, Pamekasan Regency. In this study, respondents were divided into 2 groups consisting of 1 experimental group and 1 control group. The experimental group was given banana blossom therapy which is processed as a vegetable for consumption for 1 week, while the control group was not given any therapy. The confounding variable in this study was the respondent's habit of consuming foods

that speed up wound healing. The method used to control for confounding factors is randomization. If the mother's habit of consuming protein has an influence on the results of the study because it has been divided equally by randomization in the two groups. The instrument in this study used notes on the progress of puerperal patients obtained from observations when they made postpartum visits.

A different test to determine the difference in perineal wound recovery between the group given treatment and the control group was analyzed using an independent sample t test if it was normally distributed, but if it did not meet the requirements, it used a non-parametric test, namely the Mann Whitney test and a significance level of 0.05.

## RESULTS AND DISCUSSION

### RESULT

#### Consumption of banana blossom vegetables

This table, it can be seen that out of 100 respondents, 16 respondents (50%) were included in the experimental group which was given banana blossom vegetable. Meanwhile, 16 (50%) respondents were included in the control group who were not given banana blossom vegetables.

**Table 1. Frequency distribution based on banana leaf vegetables**

Banana blossom Vegetable	Frequency	Percentage (%)
Consume	16	50
do not consume	16	50
Total	32	100

#### Speed up Recovery of Perineal Wounds

This table, it can be seen that out of 32 respondents, 10 respondents (37.5%) recovered longer than 7 days, while 20 respondents (62.5%) experienced speed up recovery  $\leq 7$  days.

**Table 2 . Frequency distribution based on wound recovery**

Wound recovery	Frequency	Percentage (%)
$\leq 7$ days	20	62.5
$> 7$ days	12	37.5
Total	32	100

#### Cross Tabulation of banana blossom vegetable with wound recovery

Cross tabulation aims to determine the difference in Speed up Recovery of Perineal Wounds between respondents who consume banana blossom vegetable and respondents who do not consume banana blossom vegetable.

#### Statistical test analysis

To get the results of the analysis used the Mann Whitney U-Test which was calculated through SPSS version 18.0 with the following results:

Mann Whithney U- Test	Lama Penyembuhan luka Perineum
Mann Whitney U	620.000
Wilcoxon W	1.66503
Z	-3.567
Asymp. Sig. (2-tailed)	.000

Based on the results of statistical tests using the Mann Whitney U-Test obtained p value  $0.000 < 0.05$  ( $\alpha$ ) which indicates that H1 is accepted and H0 is rejected, meaning that there is a difference in the duration of perineal wound healing between respondents who consume banana blossom vegetables and respondents who do not consume heart vegetables banana.

## DISCUSSION

During the delivery process, not a few mothers experienced birth canal trauma in the form of a perineal tear, which lies between the posterior commissure and the anus, with an average length of 4 cm, consisting of skin, tissue and muscle(10). Perineal injuries experienced by



**Table 3. Cross Tabulation of banana blossom vegetable with wound recovery**

Banana blossom Vegetable	Wound recovery				Total	
	≤ 7 days		> 7 days		Σ	%
	N	%	N	%		
Consume	15	93.75	1	6.25	16	100
Do not consume	5	31.25	11	68.75	16	100
Total	20	62.5	12	37.5	32	100

the mother during the delivery process will affect the mother's activity and psychology, because mothers with birth trauma will tend to limit physical activity caused by pain and discomfort in carrying out activities. In addition to physical activity, the perineal wound experienced by the mother will affect the psychological condition of the mother which will have an impact on the production of breast milk and basic care for the newborn, therefore it is necessary to provide safe therapy for postpartum mothers and breastfeeding mothers, such as giving banana blossom vegetables(13).

Banana blossom vegetables were given to all postpartum women who experienced tears during the delivery process, which were divided into two groups randomly using the randomization method to reduce confounding effects in the research process(14)Setting, and Participants: The development of the STROBE-MR Statement followed the Enhancing the Quality and Transparency of Health Research (EQUATOR. The study was conducted by comparing two groups who were given banana flower vegetable therapy. The study was conducted by comparing the two groups that were given banana blossom vegetable therapy, and the control group without treatment. The results showed that there was a significant difference in the duration of perineal wound recovery in respondents who consumed banana blossom vegetables with respondents who did not consume banana blossom vegetables(15). Based on the results of statistical tests using the Mann Whitney U-Test obtained p value 0.000 <0.05 ( $\alpha$ ) which indicates that H1 is accepted and H0 is rejected, meaning that there

is a difference in the recovery of perineal wounds between respondents who consume banana blossom vegetables and respondents who do not consume banana blossom vegetables. Banana blossom contains certain phytochemicals, which can act as antioxidants such as vitamins, flavonoids, and protein. All three have antioxidant effects that are good for the body. Antioxidants found in banana blossoms are believed to stabilize free radicals which can speed up the wound healing process(16).

The nutritional content contained in the banana blossom is very good for our body. This one ingredient is a good source of vitamins, minerals, and fiber. More complete, the following is the banana blossom content in every 100 grams consisting of 51 Kcal calories, 1.6 g protein, 0.6 g fat, 9.9 g carbohydrates, 57 g fiber, 56 mg calcium, 73.3 phosphorus mg, iron 56.4 mg, copper: 13 mg, potassium 553.3 mg, magnesium 48.7 mg, vitamin E 1.07 mg(17).

Banana blossom vegetables given every day to respondents who were part of the experimental group made the process of uniting the tissue on both sides of the wound due to tearing take place more quickly. The results of the study clearly show that almost all respondents who consume banana flower vegetables have a faster wound recovery, namely 7 days. In the wound healing process there are macrophage cells that have an important role to secrete pro-inflammatory cytokinins, anti-inflammatory and growth factors. Furthermore, fibroblasts also play a role in synthesizing collagen and growing new tissue between wound incisions so that the wound condition can return to normal. In this process,

the antioxidant content found in banana blossom helps speed up the secretion of cytokinins and fibroblasts(18).

## CONCLUSION AND RECOMMENDATION

Based on the results of statistical tests using the Mann Whitney U-Test obtained p value 0.000 <0.05 ( $\alpha$ ) which indicates that H1 is accepted and H0 is rejected, meaning that there is a difference in the recovery of perineal wounds between respondents who consume banana blossom vegetables and respondents who do not consume banana blossom vegetables.

Banana blossom has a high antioxidant content which makes the process of uniting tissue on both sides of the wound due to tearing take place more quickly. With the results of this study, it is hoped that all postpartum mothers who experience perineal tears can consume banana blossom vegetables continuously until the perineal wound heals

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