

EFFECTIVENESS OF STAGEN USE ON UTERINE INVOLUTION IN POSTPARTUM WOMEN

Gangsar Indah Lestari¹, Rizka Aprilia²

^{1,2}Midwifery Department, Metro, Poltekkes Tanjungkarang
Corresponding email: indahcahyadi@gmail.com

ABSTRAK : EFEKTIVITAS PENGGUNAAN STGEN TERHADAP INVOLUSI UTERI PADA IBU NIFAS

Latar Belakang: Masa nifas merupakan masa krusial bagi petugas kesehatan untuk memantau kondisi ibu. Pada masa ini, organ reproduksi mengalami involusi dan kembali ke kondisi sebelum hamil. Namun jika proses involusi uterus gagal maka dapat terjadi subinvolusi uterus. Kegagalan ini dapat disebabkan oleh tertahannya fragmen plasenta, infeksi, atau pendarahan yang terus menerus. Beberapa faktor seperti usia, paritas, senam nifas, inisiasi menyusui dini (IMD), mobilisasi dini, nutrisi, dan penggunaan stagen dapat mempengaruhi dan mempercepat proses involusi. Stagen mengacu pada cara tradisional yang digunakan masyarakat Jawa untuk merawat penampilan fisik wanita pasca melahirkan. Penggunaan stagen selama 40 hari diyakini efektif mengencangkan perut dan membantu involusi rahim.

Tujuan: Penelitian ini dilakukan untuk menilai efektivitas penggunaan stagen terhadap involusi uterus pada ibu nifas di TPMB Ponirah Kota Metro Lampung Tahun 2023.

Metode: Penelitian dilakukan dengan menggunakan desain penelitian quasi eksperimen dengan pendekatan dua kelompok dan jumlah responden sebanyak 30 orang, yang terbagi menjadi 15 kelompok kontrol dan 15 kelompok intervensi. Analisis data meliputi analisis univariat, bivariat, dan multivariat.

Hasil: Hasil penelitian menunjukkan efektivitas penggunaan stagen terhadap involusi uterus pada ibu nifas di TPMB Ponirah Kota Metro tahun 2023 dengan nilai P value sebesar 0,014.

Kesimpulan: Terdapat pengaruh penggunaan stagen terhadap tinggi fundus uteri ibu nifas

Saran : Wanita pasca melahirkan disarankan menggunakan stagen untuk mempercepat proses pemulihan di masa nifas.

Kata Kunci: Stagen, Involusi Uterus, Masa Nifas, Wanita Nifas

ABSTRACT

Background: The postpartum period is a crucial time for health workers to monitor the mother's condition. During this time, the reproductive organs go through involution, returning to their pre-pregnancy state. However, if the uterine involution process fails, it can lead to uterine subinvolvement. This failure can be caused by retained placental fragments, infection, or continued bleeding. Several factors, such as age, parity, postpartum exercises, early breastfeeding initiation (IMD), early mobilization, nutrition, and the use of stagen can influence and accelerate the process of involution. Stagen refers to traditional methods used by the Javanese community to care for postpartum women' physical appearance. The use of stagen for 40 days is believed to be effective in firming the abdomen and aiding in uterine involution.

Aim: This study was conducted to assess the effectiveness of stagen use on uterine involution in postpartum women at TPMB Ponirah Metro City, Lampung in 2023.

Methods: The research was conducted using a quasi-experimental research design with a two-group approach and a total of 30 respondents, split into 15 control group and 15 intervention group. Data analysis involved univariate, bivariate, and multivariate analysis.

Results: The results showed the effectiveness of using stagen for uterine involution in postpartum women at TPMB Ponirah Metro City in 2023, with a P value of 0.014.

Conclusion: There is an effect of stagen use on the uterine fundal height of postpartum women

Suggestion: Postpartum women are advised to use stagen to accelerate the recovery process during the postpartum period.

Keywords: Stagen, Uterine involution, Postpartum period, Postpartum women

INTRODUCTION

The postpartum period is a crucial time for health workers to monitor the mother's health. During this time, the reproductive organs undergo

involution, returning to their pre-pregnancy state in terms of shape and position. Uterine involution refers to the process of the uterus shrinking and returning to its original size of about 60 grams after

childbirth. This process begins with the contraction of the smooth muscles of the uterus after the placenta is delivered. Various factors, such as breastfeeding, early mobility, nutritional status, age, and parity, can affect the involution process. Uterine involution occurs in all postpartum women, and it is a natural part of the body's recovery after pregnancy. When the uterus fails to undergo proper involution, it can lead to a condition called uterine sub-involution.

The leading cause of the high maternal mortality rate in Indonesia is postpartum hemorrhage, which ranks highest. When the uterus in postpartum women fails to involute properly, it can lead to uterine subinvolution, resulting in continuous bleeding that can even lead to death. Uterine subinvolution is the delayed return of the uterus to its normal state, caused by endometrial infection, retained placental tissue, blood clots, or uterine myoma.

The cause of subinvolution can be due to retained placental fragments, infection, and continued bleeding. Several factors influence the acceleration of the involution process, such as age, parity, postpartum exercises, early breastfeeding initiation (IMD), early mobilization, nutrition, and the use of stagen. The use of stagen involves traditional practices within the Javanese community to care for the appearance of postpartum women. It is believed that using stagen for 40 days effectively tightens the abdomen and aids uterine involution. The purpose of this study was to assess the effectiveness of

stagen use on uterine involution in postpartum women at TPMB Ponirah Metro City, Lampung in 2023.

RESEARCH METHODS

The research was conducted at TPMB Ponirah in Metro City, from August to November 2023. The study included 30 respondents, divided into two groups of 15 respondents each: the intervention group and the control group. The respondents were selected using accidental sampling technique. The study included postpartum women who delivered normally at TPMB Ponirah in Metro City, had a good general condition, and experienced no complications during the postpartum period. Stagen installation was performed from day one to day seven of the postpartum period. After collecting the data, it will be analyzed using computer devices, including univariate, bivariate, and multivariate analysis.

RESEARCH RESULTS

Univariate analysis

Based on the findings in table 1, it can be concluded that in the intervention group, 80.0% of the respondents had multiparous parity, 80.0% of them underwent mobilization, and 73.3% had good nutritional intake. In the control group, 73.3% of the respondents had multiparous parity, 86.7% underwent mobilization, and 80.0% had good nutritional intake.

Table 1
Distribution of postpartum women' frequencies based on parity, early mobilization, and nutrition at TPMB Ponirah, Metro City, Lampung in 2023

Characteristics	Intervention Group		Control Group	
	Frequency (n=15)	Percentage (%)	Frequency (n=15)	Percentage (%)
Parity				
Multiparous	12	80.0	11	73.3
Primiparous	3	20.0	4	26.7
Mobilization				
Poor	3	20.0	2	13.3
Good	12	80.0	13	86.7
Nutritional Intake				
Poor	4	26.7	3	20.0
Good	11	73.3	12	80.0

Table 2

The average uterine involution of postpartum women who were and were not intervened using Stagen in TPMB Ponirah Metro City, Lampung in 2023

Uterine Fundal Height	Intervention Group		Control Group	
	Day 3	Day 7	Day 3	Day 7
Mean	9.6	4.73	10.40	5.40
Min	9	4	9	4
Max	11	6	11	7
Mean difference	Day 3	0.8	Day 7	0.67

According to table 2 and the analysis, the mean of uterine fundal height in the Stagen intervention group was 9.6 cm on day 3 and 4.73 cm on day 7. In the control group (without Stagen intervention), the mean height was 10.04 cm on day 3 and 5.40 cm on day 7.

Bivariate Analysis

The results from table 3 indicate that the statistical test yielded a p-value of 0.07. This suggests that there is no relationship between parity and uterine involution, with an odds ratio (OR) value of 4.8. This means that parity has a 4.8-fold effect on the occurrence of uterine involution between multiparous and primiparous women.

Table 3

The correlation between parity and uterine involution in postpartum women at TPMB Ponirah Metro City, Lampung in 2023

Variable	Uterine Involution				P-value	OR (95% CI)
	Normal		Fast			
	N	%	N	%		
Parity						
Multiparous	12	80.0	11	73.3	0.07	4.8 (0.797-28.89)
Primiparous	3	20.0	4	26.7		

Table 4

The correlation between mobilization and uterine involution in postpartum women at TPMB Ponirah Metro City, Lampung in 2023

Variable	Uterine Involution				P-value	OR (95% CI)
	Normal		Fast			
	N	%	N	%		
Mobilization						
Poor	3	20.0	2	13.3	0.01	0.2 (0.028-1.573)
Good	12	80.0	13	86.7		

Based on Table 4 above, the statistical test resulted in a p-value of 0.01, indicating a relationship between mobilization and uterine involution with an odds ratio (OR) of 0.2. This means that women with good mobilization have a 0.2 times faster uterine involution compared to women with poor mobilization.

Based on Table 5 above, the statistical test results indicate a p-value of 0.03, suggesting that there is no relationship between nutrition and uterine involution. The odds ratio (OR) value is 3.2, which means that women with good nutrition experience uterine involution 3.2 times faster than women with poor nutrition.

Table 5
The correlation between nutrition and uterine involution in postpartum women at TPMB Ponirah Metro City, Lampung in 2023

Variable	Uterine Involution				P-value	OR (95% CI)
	Normal		Fast			
	N	%	N	%		
Nutrition						3,2
Poor	4	26.7	3	4	0.03	(0.326-31.420)
Good	11	73.3	12	11		

Table 6
Effect of Stagen Use on Uterine Involution of Postpartum Women in TPMB Ponirah, Metro City, Lampung in 2023

Uterine Fundal Height	Mean	<i>p</i>	<i>p</i>
Intervention Group	6.68	0.000	0.014
Control Group	11.63	0.000	

As per the findings in table 6, the normality test was conducted, revealing that the data was not normally distributed ($p < 0.05$) in both the intervention group ($p = 0.000$) and the control group ($p = 0.000$). Consequently, the Mann-Whitney Test was performed to assess the impact of uterine involution on postpartum women who received the intervention of using bengkung (stagen) and those who did not, on days 3 and 7. The obtained p -value was 0.014, indicating that the use of stagen has a significant effect on uterine involution in postpartum women.

Multivariate Analysis

Multivariate analysis was conducted to identify the most influential variables. We selected variables for inclusion in the multivariate analysis based on their bivariate analysis p -values of < 0.25 . The variables included in the multivariate analysis were parity, mobilization, and nutrition. The results of the multivariate analysis using the ANCOVA test can be found in table 7 below:

Table 7
Effect of Parity, Mobilization, Nutrition, and Use of Stagen on Uterine Involution of Postpartum Women in TPMB Ponirah Metro City, Lampung in 2023

Variable	Type II Sum of Squares	R Square
Parity	0.027	0.479
Mobilization	0.843	
Nutritional Intake	0.254	
Stagen Use	0.028	
Corrected Model	0.142	

After stage I, it was determined that mobilization and nutrition were not linked to uterine involution. However, parturition and the use of were found to have a relationship with uterine involution, with an R-squared value of 0.479%. Subsequently, the analysis was revisited and the results can be seen in Table 8 as follows:

In Table 8, the multivariate analysis results indicate that the most influential factor on the uterine involution of postpartum women is the use of bengkung/stagen, with a p -value of 0.018. This means that the use of bengkung/stagen, in combination with parity, affects uterine involution by 0.285%.

Table 8
Effect of Parity and Stagen Use on Uterine Involution of Postpartum Women at TPMB Ponirah, Metro City, Lampung in 2023

Variable	Type II Sum of Squares	R Square
Parity	0.043	
Stagen Use	0.018	0.285
Corrected Model	0.031	

DISCUSSIONS

Uterine Involution of Postpartum Women at TPMB Ponirah, Metro City in 2023

In this study, the intervention group showed that the uterine fundal height on day 3 was 9.6 cm and on day 7 was 4.73 cm on average, with a minimum of 4 cm and a maximum of 7 cm. In contrast, the control group (without intervention) had an average uterine fundal height on day 3 of 10.40 cm and on day 7 of 5.40 cm, with a minimum of 4 cm and a maximum of 7 cm. These results suggest that using stagen for 7 days can speed up uterine involution compared to postpartum women who do not use stagen. It's important to note that not everyone in the intervention group experienced faster involution than normal, which may be due to other factors such as parity, nutritional intake, and mobilization actions.

The findings of this study are supported by research conducted by Aini in 2019, titled "Effectiveness of the Combination of Bengkung (Stagen) with Oxytocin Massage in Reducing the Uterine Fundal Height of Postpartum Women in Blora Primary Health Care." The research reveals that the average decrease in uterine fundal height in the group receiving the combination of bengkung (stagen) and oxytocin massage before the intervention is 10.74 with a standard deviation of 0.562. After treatment, the average decrease is 1.05 with a standard deviation of 1.026. The difference between the pretest and posttest yields an average of 9.58 with a standard deviation of 1.170. This demonstrates that the mean value before treatment is higher than the mean value after treatment, indicating a significant change resulting from the combination of bengkung (stagen) with oxytocin massage.

During the postpartum period, which lasts approximately 6 weeks, certain actions can help speed up the involution process for the mother. Uterine involution involves the reorganization and shedding of the decidua/endometrium and the placental attachment site, leading to a decrease in size and weight of the uterus, as well as changes in its location and in the color and amount of lochia. If the uterus fails to return to a non-pregnant state, it

may cause subinvolution. Retained placental fragments, infection, and late postpartum hemorrhage are the most common causes of uterine subinvolution (Maritalia, 2014).

One of the methods to speed up the process of uterine involution is the use of stagen. This practice is deeply rooted in the community and offers benefits during the recovery process. Postpartum women often choose to use stagen due to cultural influences and the belief that it can help them slim down. They also report feeling more comfortable, balanced, and confident when using stagen (Rahayu, 2018).

Effectiveness of Stagen Use on the Uterine Involution Process of Postpartum Women in TPMB Ponirah Metro City in 2023

The study's results show that there is a significant difference in the value of uterine fundal height between the group that received the stagen intervention and the group that did not on days 3 and 7 (p -value = 0.014). This suggests that there is an impact of using stagen on the uterine fundal height of postpartum women.

The findings of this study do not align with the research conducted by Mayasari in 2017. Mayasari's study, titled "The Difference in the Use of Stagen with a Decrease in the Uterine Fundal Height in Postpartum Women at the Nur Hikmah Gubug Clinic, Grobogan Regency," indicated that the average of uterine fundal height was 6.45 cm for the group using tight stagen and 5.61 cm for the group using loose stagen. The results of the Independent T-test revealed a significant difference in the reduction of the fundus uteri height between the tight and loose stagen groups, with a p -value of 0.006.

The study results are consistent with Aini's research from 2019, which focused on the effectiveness of combining the use of bengkung (stagen) with oxytocin massage to reduce uterine fundal height in postpartum women in the Blora Primary Health Care. The findings indicate that the combination of bengkung (stagen) and oxytocin massage is more effective in decreasing the uterine

fundal height in postpartum women (p-value = 0.006).

Traditionally, stagen is known as a long cloth commonly used by mothers or grandmothers in rural areas. However, with technological and cultural advancements, the use of stagen has evolved. It is now used not only as a traditional clothing accessory but also in healthcare. Traditionally, the use of bengkung (stagen) can help women slim their stomach after giving birth by applying pressure to the abdominal cavity, aiding the contraction of the uterus back to its original shape (Ernawati, 2013).

Some of the benefits of using a support garment known as a postpartum girdle, or stagen, include promoting uterine involution, restoring abdominal tone, reducing pain, and providing back support for postpartum women. This helps improve posture more quickly. The abdominal region experiences pressure after childbirth, and the stagen helps support it, along with the lumbopelvic region, by applying gentle pressure on the transversus abdominis muscle, which in turn helps the abdominal muscles function more effectively. Additionally, incorporating regular physical exercise along with wearing the stagen can reduce the occurrence of lower back pain in postpartum women (Motolla, 2012).

Based on the results of this study and several previous studies, it can be concluded that using a postpartum girdle, known as a stagen, can be an alternative method that helps with the process of uterine involution. This is because the use of a stagen can help the abdominal muscles work more effectively by applying pressure on the abdomen, which in turn supports the abdomen and lumbopelvic region by engaging the transversus abdominis muscle.

Effect of Factors Affecting Uterine Involution at TPMB Ponirah, Metro City in 2023

The findings of this study suggest that both parity and the use of stagen have an impact on uterine involution, with a 0.285% influence. The results indicate that the combined effect of these two variables accelerates uterine involution. It's important to note that there may be other factors influencing uterine involution in pregnant women, such as maternal age. In this study, the respondents were women in the age group of 20-35 years.

The process of uterine involution is significantly influenced by the mother's age at childbirth. The ideal age for a good involution process is between 20 and 30 years. This is

because the uterine muscles have better elasticity in women within this age range. Women who are 35 years old or older tend to have reduced muscle elasticity. Furthermore, mobilization promotes improved circulation, deep breathing, and stimulates normal gastrointestinal function. Early mobilization leads to good uterine contractions, resulting in a firm uterine fundus, which helps avoid the risk of abnormal bleeding since contractions narrow the open blood vessels (Elisabeth Siwi, 2017).

During the postpartum period an additional 500 kcal of energy is needed per day, this additional energy is needed to support the uterine contraction process in the involution process towards normal. Lack of energy in postpartum women can cause the contraction process to not be maximized, so that uterine involution continues to run slowly (Elisabeth Siwi, 2017).

Stagen is a culture of wearing support cloth that is widely used by postpartum women to get compression or pressure on the abdomen so that it helps support the abdomen and lumbopelvic region by putting a little pressure on the transversus abdominis muscle (Benjamin et al, 2013).

The benefits of using stagen include being able to help accelerate uterine involution, restore abdominal tone, reduce back pain and support the back of postpartum women so that it helps the formation of posture to be formed more quickly (Amalia, 2014).

CONCLUSIONS

There is an effect of stagen use on the uterine fundal height of postpartum women.

SUGGESTION

Postpartum women are advised to use stagen to accelerate the recovery process during the postpartum period.

REFERENCE

- Aini. 2019. *Efektivitas Kombinasi Penggunaan Bengkung (stagen) dengan pijat oksitosin terhadap penurunan tinggi fundus uteri ibu post partum di Wilayah Kerja Puskesmas Blora*. Departement of Midwifery, Poltekkes Kemenkes Semarang, Indonesia
- Almatsier, S. 2015. *Prinsip Dasar Ilmu Gizi*. PT. Gramedia Pustaka Utama: Jakarta
- Amalia, A. 2014. *Nyeri Pasca Bersalin*. Majalah Ayah Bunda. Terbit bulan Desember 2014.
- Ambarwati, dkk. 2013. *Asuhan Kebidanan Nifas*. Mitra Cendika Press : Yogyakarta
- Benjamin, DKK. 2013. *Lateral Epicondylitis Massage and Body Work*. Diakses dari

- http://www.massagetherapy.com/articel_id/1199/Tennis-Elbow
- Cunningham, F, G. 2012. *Obstetri Wiliams*. Jakarta : EGC.
- Danuatmaja, B, Meiliasari, M. 2010. *40 Hari Pasca Persalinan Masalah dan Solusinya*. Penerbit Puspa Swara : Jakarta.
- Dewi & Sunarsih. 2014. *Asuhan kehamilan untuk Kebidanan*. Salemba Medika : Jakarta
- Dinkes Provinsi Bengkulu. 2018. *Profil Data Kesehatan Provinsi Bengkulu tahun 2017*. Dinkes Provinsi Bengkulu.
- Elisabeth Siwi Walyani. 2017. *Asuhan Kebidanan Masa Nifas dan Menyusui*. Yogyakarta. PustakaBaruPress.
- Eni Retna Ambarwati, 2018. *Asuhan Kebidanan Nifas*. Yogyakarta : Mitra Cendikia Press
- Ernawati, D, Dkk. 2013. *Hubungan Penggunaan Stagen Terhadap Diastasis Rectus Abdominis di Rumah Bersalin Hasanah Gemolong Sragen*. Fakultas Ilmu Kesehatan Universitas Muhammadiyah Surakarta
- Handayani, E. 2016. *Asuhan Holistik Masa Nifas dan Menyusui*. Trans Medika : Yogyakarta
- Kemenkes RI. 2019. *Profil Kesehatan Indonesia 2018*. Kementerian Kesehatan Republik Indonesia : Jakarta
- Kemenkes RI. 2021. *Profil Kesehatan Indonesia 2020*. Kementerian Kesehatan Republik Indonesia : Jakarta
- Manuaba, IBG. 2016. *Ilmu Kebidanan, penyakit Kandungan dan KB untuk Pendidikan Bidan Edisi 2*. Jakarta: EGC
- Maryunani A. 2016. *Asuhan Kegawatdaruratan dalam Kebidanan*. CV. Trans Info Media : Jakarta
- Motolla, MF. 2012. *Post partum exercise regardless of intencity improves chronic disease risk factor*. *Pub med gov diakses pada tanggal 21 Maret 2017*
- Nurmala. 2014. *Asuhan Kebidanan Masa Nifas*. Selaksa Media : Malang
- Pitriani & Andriyani. 2014. *Panduan Lengkap Asuhan Kebidanan Ibu Nifas Normal (Askeb III)*. Dipublish : Yogyakarta.
- Rahayu, S & ED, D,W. 2018. *Panduan Pijat Oksitosin Untuk Bidan Dalam Kelangsungan Kesehatan Ibu dan Anak*. CV. Global Press : Yogyakarta
- Ramadhan. 2019. *Profil Pasien Hemorrhagic Postpartum di RSUP Dr. M. Djamil Padang*. Artikel Penelitian. Jurnal Kesehatan Andalas. 2019 : 8 (Supplement 2)
- Saleha, S. 2016. *Asuhan Kebidanan pada Masa Nifas*. Jakarta : Salemba Medika.
- Suherni, W. 2012, *Perawatan Masa Nifas*, Fitramaya : Yogyakarta.
- Sugita dan Widiastuti. 2016. *Budaya Jawa Ibu Postpartum di Desa Candirejo Kecamatan Ngawen Kabupaten Klaten*. Jurnal Kebidanan Dan Kesehatan Tradisional, Volume 1, No 1, Maret
- Walyani, E. S. & Purwoastuti, E. (2017). *Asuhan Kebidanan Masa Nifas & menyusui*. Pustaka Baru Pres : Yogyakarta
- WHO. 2019. *Maternal mortality*. Diakses dari <https://www.who.int/news-room/fact-sheets/detail/maternal-mortality>