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COMPARISON OF MASSAGE AND SOAK EFFECTIVENESS WARM WATER MIXED WITH SALT WITH MASSAGE AND SOAKING IN WARM WATER MIXED WITH GANJUR TO OVERCOME DISCOMFORT OF EDEMA ON THE BACK OF PREGNANT WOMEN'S FEET IN THE THIRTY TRIMESTERS AT THE PUTRI LAYANI CLINIC

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Abstract

***Introduction: Increased** body weight is a physiological change in pregnant women in the third trimester, the mother's body is supported by the legs, this causes edema because blood vessel circulation is disrupted. Efforts made are pharmacological and non-pharmacological. non-pharmacological massage and warm water immersion mixed with salt and massage and warm water immersion mixed with kencur. Objective: To see the comparison of edema reduction given the intervention of massage and warm water immersion mixed with salt and massage and warm water immersion mixed with kencur. Method: This study is a Quasi-experimental study with a Pretest Posttest Nonequivalent Control Group Design. A sample of 2 pregnant women in TM III, each given a different intervention, namely massage and warm water immersion mixed with salt with massage and warm water immersion mixed with kencur, then the comparison of edema depth before and after the intervention was given. The observation sheet used is a measurement tool for edema grade, namely pitting edema with grade 0-4. Results: Respondent 1 on the first and second days did not experience a decrease, but on the third to fifth day there was a decrease, respondent 2 on the first day had experienced a decrease in edema. Conclusion: respondents to massage and kencur water immersion experienced a faster decrease in edema compared to respondents to massage and salt water immersion.*

***keywords**: massage andwarm salt water soak, massage and galangal water soak, third trimester of pregnancy, edema.*

1. INTRODUCTION

Estrogen hormone during pregnancy triggers increased fluid retention. Physical changes related to fluid retention where when the uterus enlarges then the weight increases at this time the legs as the body's support will increase the load. Edema that occurs due to the legs becoming heavier to support the body can be treated with pharmacological and non-pharmacological therapy, to treat edema in the legs with pharmacological therapy in the form of drugs such as antihypertensives (calcium channel blockers, minoxidil, or hydralazine), non-steroidal anti-inflammatory drugs (celecoxib and ibuprofen). furosemide and Hydrochlorothiazide. These drugs are commonly used in medical problems with a working

system of water and salt being removed if excessive in the body through urine.[1] Edema that appears can be treated with non-pharmacological therapy including massage and soaking in warm water mixed with salt. Research states that edema can be minimized by warm water soaking therapy and foot massage.[2] Meanwhile, the results of other non-pharmacological therapy studies in minimizing edema withMassage and soak in warm water mixed with kencur, done once a day for 5 days.[3] When the problem of leg discomfort due to edema in pregnant women in the third trimester is resolved, the pregnant woman will go through pregnancy with a comfortable feeling, which will affect the quality of the pregnant woman's life. Research results state that quality of life is closely related to physical discomfort. Both therapies have been shown to reduce edema, researchers wanted to compare the effectiveness of the two interventions.[4]

2. METHOD

This study is a Quasi-experimental study with a Pretest Posttest Nonequivalent Control Group Design. A sample of 2 pregnant women in TM III, each of whom was given a different intervention, namely soaking in warm water using salt and soaking in kencur water, then the comparison of edema depth before and after the intervention was given will be studied. The observation sheet used is an edema grade measurement tool, namely pitting edema with grades 0-4, 0 (no pitting): your skin immediately bounces back after being pressed. Grade 1: if pressed, you can barely see the dimples, but there are dimples that disappear in 3 seconds. Grade 2: if pressed a little dimple, but disappear in 5 seconds. Grade 3: if pressed, the dimples are quite deep and take up to 7 seconds to disappear. Grade 4: if pressed, the dimples are deeper and take more than 7 seconds.[5]

Each Intervention was carried out for 5 days, foot massage was carried out combined with warm water soaks mixed with salt and kencur. The foot massage was carried out, namely massage on each foot with a massaging movement on the soles of the feet, given for 10-20 minutes.[6] Soaking in warm water mixed with salt, namely warm water with a temperature of 380 C which is measured using a water thermometer, 6 liters of warm water with 5 teaspoons of salt added, then the feet are soaked up to the ankles for 20-30 minutes.[7] massage and soak in warm water mixed with kencur, 9 grams of kencur is put into warm water with a temperature of 380 C which is measured using a thermometer, 6 liters of water is soaked in the feet up to the ankles, done for 20-30 minutes.[8]

The research flow of both respondents was given informed consent, continued by filling out the pitting edema observation sheet before the intervention, then the intervention of massage and warm water immersion mixed with salt was carried out on respondent 1 with massage and warm water immersion mixed with galangal on respondent 2. After the intervention was given, the respondents' pitting edema was measured again, this was repeated the next day until the fifth day.

3. RESULTS

There were 2 respondents from pregnant women who complained of edema on the back of the legs.

Respondent 1

Data collection on February 25, 2024 at 14.00. Subjective data from the mother stated that this was her third pregnancy and had miscarriage once, this was a repeat visit and complained of swelling in the legs. HPHT on June 15, 2023. The results of the examination showed BP 120/80 mmHg, Pulse 87 x / minute, Rr 20 x / minute, Abdominal examination found Leopold I TFU 30 cm, Fundus Uteri felt one round, soft, non-bounced part. (Buttock

Presentation). Contractions: none. Leopold II on the right side of the mother's abdomen, one hard part was felt, elongated as if there was resistance (Back). On the left side of the mother's abdomen, one smallest part was felt (Extremities). Leopold III the lowest part was felt to be round, hard, bounced (cephalic presentation), not yet in PAP, convergent 4/5. DJJ 137 x / minute. The results of the physical examination of the lower extremities showed Edema, Pitting Edema grade III: 5-6 mm (If pressed, the dimple is quite deep and takes up to 7 seconds to disappear.

Respondent 2

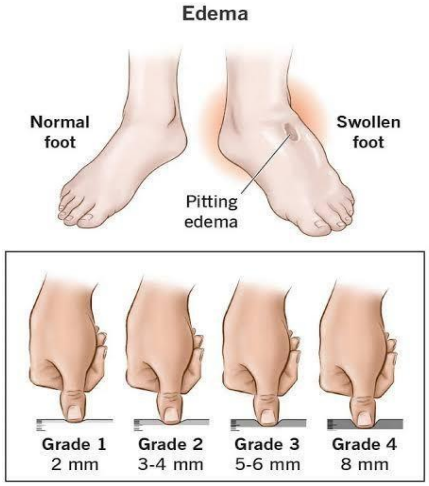
Data collection on February 25, 2024 at 14.00. The mother's subjective data said this was a pregnancy thatFirst, this is a return visit and complaintswelling in the legs. HPHT June 02, 2023.The results of the examination were obtainedBP 110/70 MmHg, Pulse 85 x/minute, Rr 19 x/minute, Abdominal examination Leopold I TFU 30 cm, felt round, soft and not bouncy (buttocks) Leopold II the right side of the mother's abdomen is felt small parts of the fetus (extremities). The left side of the mother's abdomen: felt flat, elongated as if there is resistance (back), Leopold III the lowest part is felt: round, hard, bouncy and cannot be moved (head), Leopold IV the entry of the lowest part of the fetus into the PAP (Divergent) 3/5 parts. DJJ 145x/minute. The results of physical examination of the lower extremities show Edema, Pitting Edema grade III: 5-6 mm (If pressed, the dimple is quite deep and takes up to 7 seconds to disappear.

Table 1: *Pitting Edema grade before and after intervention*

Intervention	Before Intervention	Day 1	Day 2	Day 3	Day 4	Day 5
Massage and Soak Warm Water Mixed with Salt (Respondent 1)	Pitting Edema Grade III: 5-6 mm If pressed, the dimple is quite deep, however lost in 7 seconds	Pitting Edema Grade III: 5-6 mm If pressed, the dimple is quite deep, however lost in 7 seconds	Pitting Edema Grade III: 5-6 mm If pressed, the dimple is quite deep, however lost in 7 seconds	Pitting Edema Grade II: 3-4 mm if pressed the dimple is a little deep, but disappears within 5 seconds.	Pitting Edema Grade II: 3-4 mm if pressed the dimple is a little deep, but disappears within 5 seconds.	Pitting Edema Grade I: 2 mm if pressed a little deeply, but disappears within 3 seconds.
Massage and soak in warm water mixed with Galangal (Respondent 2)	Pitting Edema Grade III: 5-6 mm If pressed, the dimple is quite deep, however lost in 7 seconds	Pitting Edema Grade III: 5-6 mm If pressed, the dimple is quite deep, however lost in 6 seconds	Pitting Edema Grade II: 3-4 mm if pressed the dimple is a little deep, but disappears within 5 seconds.	Pitting Edema Grade I: 2 mm if pressed a little deeply, but disappears within 3 seconds.	Pitting Edema Grade I: 2 mm if pressed a little deeply, but disappears within 3 seconds.	Pitting Edema Grade 0 (No pitting)

The observation sheet used is pitting edema grade, namely pitting edema with grade 0-4, 0 (no pitting): your skin immediately bounces back after being pressed. Grade 1: if pressed

you can barely see the dimple, but there is a dimple that disappears in 3 seconds. Grade 2: if pressed a little dimple, but disappears in 5 seconds. Grade 3: if pressed the dimple is quite deep and takes up to 7 seconds to disappear. Grade 4: if pressed the dimple is deeper and takes more than 7 seconds.



Pitting Edema Grade Image

From the results of the study above, it was found that there was a decrease in pitting edema grade from day to day in both respondents 1 and 2. It can be seen in the table on the first day (before the intervention) in each respondent, Pitting Edema Grade III was obtained: 5-6, namely if the dimple is pressed quite deeply, but it disappears within 7 seconds, both respondents had the same pitting edema before the intervention. On the first day of intervention, it was foundPitting Edema Grade III and dimples disappeared in 7 seconds in respondent 1, while in respondent 2 Pitting Edema Grade III but the time for the dimples to disappear was 6 seconds, which means it is faster compared to warm water soak massage using salt (respondent 1). On the second day, the warm water soak massage using salt was still the same as the first day, while in respondents, the warm water soak massage using galangal had decreased in grade compared to the previous day.

Foot massage is given in 10-20 minutes on each foot, namely on the soles of the feet by rubbing, squeezing or rotating. The mechanism of this foot massage is that the lymph that flows into the blood circulation flows smoothly so that it provides a relaxing effect.[9] After massage and drying with a towel, then the feet are soaked in warm water mixed with salt. The mechanism of warm water in providing a relaxing effect is that the blood vessels dilate, stimulate endorphins so that the pulse rate decreases and even blood pressure reduces edema.[10] Mix warm water with 5 tsp of salt in a basin and soak your feet up to the ankles for 20-30 minutes. Salt serves to moisturize the skin, clear the skin, and relieve inflammation in the feet. Sodium contained in salt at the time is able to reduce swelling and inflammation by binding intracellular water or intercellular out due to differences in concentration.[11]

On the third day, Pitting Edema Grade II was found if the dimple was pressed a little deeper, but it disappeared within 5 seconds in respondents who received a warm water soak massage using salt, while in respondents who received a warm water soak massage using kencur (respondent 2), it continued to decrease to grade I. On the third day, the use of kencur was seen to decrease edema more quickly. A combination of warm water and kecur, grated kencur as much as 9 grams, put into 6 liters of water for the ankles for 20-30 minutes. Flavanoids can reduce swelling, inflammation that can be found in kencur are polyphenols, triterpenoids, tannins, quinones, flavonoids.[12] On the 4th day, there was no change in Pitting Edema Grade for each respondent, it was still the same as the third day. On the last day or

the fifth day, there was a decrease in each respondent, in respondent 1 it decreased to Pitting Edema Grade 1, even in respondent 2 the Pitting Edema Grade changed to 0, meaning the edema problem was resolved.

4. CONCLUSION

It can be concluded that each intervention given to respondent 1 on the first and second day did not show a decrease, while in respondent 2 on the second day there was no change, but from the second day to the end there was a decrease. Although both experienced a decrease, respondent 1 experienced a faster decrease compared to respondent. The effect of the combination of massage with galangal soaking was faster in reducing pain scores than salt water soaking.

5. ACKNOWLEDGEMENTS

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