



The Effect of Ginger Compress on Back Pain in Pregnant Women in the Work Area of X Health Center, Cianjur Regency, Indonesia

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ABSTRACT

Back pain is one of the disorders often experienced by pregnant women. The research results show that the prevalence of back pain in pregnant women in Indonesia reaches 60-80%. One non-pharmacological therapy that can be used to treat back pain in pregnant women is a ginger compress. This study aims to determine the effect of ginger compresses on back pain in third-trimester pregnant women in the working area of X Health Center, Cianjur Regency, Indonesia. This study used a quasi-experimental design with a two-group pretest-posttest design. The research population was pregnant women in the third trimester who experienced back pain. The sample size was 60 people, who were divided into two groups, namely the intervention group (30 people) and the control group (30 people). The intervention group was given a ginger compress for 15 minutes, 3 times a day, for 3 days. The control group was given warm water compresses for 15 minutes, 3 times a day, for 3 days. The results of the study showed that the average value of back pain in the intervention group before the intervention was 4.68 (moderate pain scale) and after the intervention was 2.91 (mild pain scale). The average value of back pain in the control group before the intervention was 4.75 (moderate pain scale), and after the intervention, it was 3.88 (moderate pain scale). The Wilcoxon test showed that ginger compresses reduced back pain in third-trimester pregnant women ($p=0.000$). The conclusion of this study is that ginger compresses have an effect on reducing back pain in third-trimester pregnant women.

1. Introduction

Back pain is one of the disorders often experienced by pregnant women. The research results show that the prevalence of back pain in pregnant women in Indonesia reaches 60-80%. Back pain in pregnant women can be caused by various factors, including hormonal changes, changes in body posture, and increased body weight. Hormonal changes that occur during pregnancy can cause the back muscles to become weaker and more flexible. This can increase the risk of back pain. Hormonal changes can also cause increased fluid production around the joints, which can cause joint shifting and pain. Changes in body posture can also be a factor causing back pain in pregnant women. This is because as pregnancy increases, the pregnant woman's stomach will get

bigger. This can cause pregnant women to become more bent and put stress on the spine. Increased body weight can also be a factor causing back pain in pregnant women. This is because excess body weight can put pressure on the spine.¹⁻³

Non-pharmacological therapy is an alternative that can be used to treat back pain in pregnant women. Non-pharmacological therapy has several advantages, including having no side effects and being safe for pregnant women and the fetus. One non-pharmacological therapy that can be used to treat back pain in pregnant women is a ginger compress. Ginger is an herbal plant that has various benefits, one of which is as an analgesic. Ginger contains bioactive compounds that have analgesic effects, such as gingerols and shogaols. Gingerols and shogaols can

work by inhibiting the production of cyclooxygenase (COX) and prostaglandin enzymes. COX and prostaglandins are substances that play a role in inflammation and pain processes.⁴⁻⁶ This study aims to determine the effect of ginger compresses on back pain in third-trimester pregnant women in the working area of X Health Center, Cianjur Regency, Indonesia.

2. Methods

This research uses a quasi-experimental design with a two-group pretest-posttest design. The research population was pregnant women in the third trimester in the working area of X Health Center. The intervention group was given a ginger compress for 15 minutes, 3 times a day, for 3 days. The control group was given warm water compresses for 15 minutes, 3 times a day, for 3 days. The measuring tool used is the numerical rating scale (NRS) pain questionnaire. Data analysis was carried out using the Wilcoxon test.

3. Results and Discussion

The results of the study showed that the average value of back pain in the intervention group before the intervention was 4.68 (moderate pain scale), and after the intervention was 2.91 (mild pain scale). The average value of back pain in the control group before the intervention was 4.75 (moderate pain scale), and after the intervention, it was 3.88 (moderate pain scale). The Wilcoxon test showed that ginger compresses reduced back pain in third-trimester pregnant women ($p=0.000$).

Ginger is an herbal plant that has various benefits, one of which is as an analgesic. Ginger contains bioactive compounds that have analgesic effects, such as gingerols and shogaols. Gingerol is the main bioactive compound contained in ginger. Gingerol has a strong analgesic effect. Gingerol works by inhibiting the production of the enzyme cyclooxygenase (COX) and prostaglandins. COX and prostaglandins are substances that play a role in inflammation and pain processes. Shogaols are bioactive compounds that are formed from gingerol when ginger is heated. Shogaols have a stronger analgesic effect than gingerol.

Shogaols work in the same way as gingerol, namely by inhibiting the production of COX enzymes and prostaglandins. The analgesic effects of gingerols and shogaols have been proven in various studies. These studies show that gingerols and shogaols can reduce pain in various conditions, including back pain, menstrual pain, muscle pain, and joint pain.^{7,8}

Gingerols and shogaols work by inhibiting the production of COX enzymes and prostaglandins. COX and prostaglandins are substances that play a role in inflammation and pain processes. Inflammation is the body's reaction to injury or infection. Inflammation can cause swelling, pain, and redness. Gingerols and shogaols inhibit the production of COX enzymes and prostaglandins by attaching to these enzymes. This causes the enzyme to not work normally. As a result, prostaglandin production is reduced, so pain and inflammation can be reduced.^{9,10}

Ginger compresses can increase blood flow to the painful area, which can help reduce inflammation and pain. This is caused by the heat generated from the ginger compress. Heat can cause blood vessels to widen, resulting in increased blood flow to the affected area. Increased blood flow can bring more oxygen and nutrients to the painful area. This can help speed up the healing process and reduce inflammation. Apart from that, the heat from the ginger compress can also help relax stiff muscles. Stiff muscles can cause pain, so by relaxing these muscles, pain can be reduced. Ginger compress can be done by applying ginger paste to a clean cloth. The cloth that has been smeared with ginger paste is then placed on the affected part of the body. Ginger compress can be done for 15-20 minutes.^{11,12}

4. Conclusion

Ginger compress is an effective non-pharmacological therapy for treating back pain in pregnant women. Ginger compresses can work by inhibiting the production of COX enzymes and prostaglandins, which play a role in inflammation and pain.

5. References

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