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Original Research

Jin's Three Needle Acupuncture and Moxibustion Reduce Pain Intensity in Gastritis

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ABSTRACT

Background: *Gastritis is a common disease in the community caused by unhealthy lifestyles. Long-term repeated use of stomach medication has the potential to cause side effects and organ damage. Acupuncture is an effective therapy for chronic pain that has long-lasting effects without side effects. This study aims to determine the effect of Jin's Three Needle acupuncture and moxibustion therapy on pain intensity in gastritis patients.*

Methods: *This study used a true experimental design with a two-group pretest-posttest design. The sample consisted of 30 respondents who met the inclusion and exclusion criteria, divided into two groups. Group 1 received Jin's Three Needle acupuncture and moxibustion therapy, while group 2 received only Jin's Three Needle acupuncture therapy. The measurement instrument used a pain scale. Data analysis used the Shapiro-Wilk normality test, followed by an independent t-test and Mann-Whitney test.*

Results: *The analysis showed that the group receiving Jin's Three Needle acupuncture and moxibustion therapy experienced a more significant reduction in pain scale compared to the acupuncture-only therapy group with a p-value of <0.001.*

Conclusion: *Jin's Three Needle acupuncture therapy combined with moxibustion is effective in reducing the intensity of gastritis pain. The combination of acupuncture and moxibustion therapy is recommended as an alternative treatment for gastritis to increase effectiveness and reduce the side effects of gastric medication.*

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INTRODUCTION

Unhealthy lifestyles are a major factor in the increase in gastritis cases, which have an impact on the decline in the quality of life of the community (Nirmalarumsari & Tandipasang, 2020). Gastritis is generally caused by poor diet, stress, and alcohol consumption (Rosiani et al., 2020). The prevalence of gastritis in Indonesia is quite high, with an incidence rate of 40.8% or around 274,396 cases out of the total national population (Mustakim et al., 2021). This condition indicates the need for effective treatment efforts to reduce the impact of gastritis.

Acupuncture therapy has begun to gain attention as a safe and effective alternative treatment method for digestive problems, including gastritis (Sumanto & Kristiyawati, 2019). Acupuncture has been proven to improve gastric function and strengthen the gastric mucosal barrier without serious side effects (Wang et al., 2021). The use of Jin's Three Needle acupuncture shows potential in reducing the intensity of gastric pain and improving the condition of gastritis patients (Wulandari & Prihartono, 2016).

In addition to acupuncture, moxibustion therapy is also considered effective in treating gastritis complaints by stimulating specific acupuncture points (Gu et al., 2019). A 2019 study showed the role of moxibustion on the Zusanli and Neiguan points in reducing chronic gastritis symptoms through the mechanism of increased blood flow and immune response (Azer & Akhondi, 2022). However, research combining Jin's Three Needle acupuncture and moxibustion therapy in managing gastritis pain intensity is still limited, so further research is needed.

Previous studies have mostly examined the application of acupuncture or moxibustion separately, while the combination of these two therapies has not been extensively explored scientifically (Hidayah, 2017; Nurhidayati, 2021). The combination of both therapies is expected to provide a more optimal synergistic effect in reducing the intensity of gastritis pain compared to a single method (Wulandari & Prihartono, 2016; Gu et al., 2019). Therefore, this study presents a new approach in the form of evaluating the combined effects of Jin's Three Needle acupuncture and moxibustion on gastritis patients.

The purpose of this study was to determine the effect of a combination of Jin's Three Needle acupuncture and moxibustion therapy on pain intensity in patients with gastritis at Azzahro Acupuncture Blitar. This study is expected to contribute scientifically to the development of effective, safe, and sustainable complementary therapy methods for treating gastritis, especially stomach pain.

MATERIALS AND METHOD

This study used a quasi-experimental design with a two-group pretest-posttest design. This design was chosen because it allows for measuring the effect of Jin's Three Needle acupuncture and moxibustion therapy on the intensity of gastritis pain by comparing the conditions before and after intervention in the experimental and control groups. This approach is effective for determining changes resulting from treatment directly on research subjects (Sugiyono & Puspandhani, 2020).

The study was conducted at Azzahro Acupuncture Blitar from August to October 2022. The study population consisted of patients who experienced gastritis with epigastric pain at that location during that period. The sampling technique used purposive sampling based on inclusion and exclusion criteria to determine the appropriate research subjects. The sample consisted of 30 people divided equally into two groups, namely 15 experimental subjects and 15 control subjects (Masturoh Anggita, 2018).

The inclusion criteria included patients aged 35-50 years who experienced epigastric pain with a pain scale of 4-8, were willing to undergo acupuncture and moxibustion therapy, and signed an informed consent form. The exclusion criteria consisted of patients who withdrew during the study, did not follow the therapy schedule, and patients who underwent therapies other than those specified. The independent variable in this study was the type of therapy, namely a combination of acupuncture and moxibustion, while the dependent variable was the intensity of gastritis pain (Nursalam, 2020).

The research instrument used the Numerical Rating Scale (NRS) to measure patients' pain intensity. The validity of the instrument was ensured through the use of the NRS scale, which has been widely used, and its reliability has been tested internationally. Data were collected through direct observation before and after therapy was performed eight times in one month. Standard operating procedures were applied to ensure consistency and accuracy of measurements (Sugiyono & Puspandhani, 2020).

Data analysis was performed using statistical tests with SPSS version 16 software. Data normality was tested using the Shapiro-Wilk test to determine the selection of parametric or nonparametric statistical tests. The Independent t-test and Mann-Whitney test were used to compare pain intensity between groups before and after therapy. This analysis aimed to determine the significance of the difference in the effect of the therapy given (Notoatmodjo, 2012).

This study obtained ethical approval and adhered to research ethics principles, including voluntary consent through informed consent, data confidentiality, and protection of research subjects. The researchers ensured that participation in the study was not forced and that each subject was given a transparent and honest explanation of the procedures and benefits of the study (Nursalam, 2020).

RESULTS

Table 1. Characteristics of Research Subjects Based on Gender, Age, and Occupation (n=30)

Characteristics	Category	Experimental n	Control n (%)	Total n (%)
Gender	Male	6 (40%)	6 (40%)	12 (40%)
	Female	9 (60%)	9 (60%)	18 (60%)
Age (years)	35–40	6 (40%)	6 (40%)	12 (40%)
	41–45	4 (26.7%)	2 (13.3%)	6 (20%)
	46–50	5 (33.3%)	7 (46.7%)	12 (40%)
Occupation	Housewife	4 (26.7%)	5 (33.3%)	9 (30%)
	Self-employed	3 (20%)	3 (20%)	6 (20%)
	Factory worker	1 (6.7%)	2 (13.3%)	3 (10%)
	Merchant	5 (33.3%)	4 (26.7%)	9 (30%)
	Teachers	2 (13.3%)	1 (6.7%)	3 (10%)

Table 1. Explains that the majority of research subjects were female (60%) with an average age of 41–42 years and the most common occupation was trader (30%). The composition between the experimental and control groups was relatively balanced, indicating homogeneous initial characteristics.

Table 2. Pain Scale Before and After Jin's Three Needle Acupuncture Therapy with and without Moxa

Group	Pain Scale Before (Mean ± SD)	Pain Scale After (Mean ± SD)	Decrease (Mean ± SD)	Median (Min–Max)
Experimental	6.00 ± 1.20	1.73 ± 0.80	4.27 ± 0.70	4.00 (3–5)
Control	5.53 ± 1.06	3.06 ± 0.91	2.47 ± 0.74	2.00 (1–4)

Table 2 shows that the average pain scale before therapy in the experimental group was 6.00, decreasing to 1.73 after therapy. In the control group, the average pain scale before therapy was 5.53, decreasing to 3.06 after therapy. There was a difference in the average pain reduction of 4.27 in the experimental group and 2.47 in the control group, indicating a greater reduction in the group that received a combination of acupuncture and moxa.

Table 3. Hypothesis Test of Pain Scale Reduction Before and After Jin's Three Needle Acupuncture Therapy with and without Moxibustion

Type of Test	Group	Pre-test (Mean ± SD)	Post-test (Mean ± SD)	Difference (Δ)	Statistics (t/Z)	p-value
Independent t-test	Experiment	6.00 ± 1.20	1.73 ± 0.80	4.27 ± 0.70	t = 7.096	<0.001
	Control	5.53 ± 1.06	3.06 ± 0.91	2.47 ± 0.74	—	—
Mann-Whitney	Between groups	—	—	—	Z = -4.358	<0.001

Table 3 shows that the Shapiro-Wilk test indicates that the data are not normally distributed for most variables ($p < 0.05$). Therefore, a follow-up test using the Mann-Whitney test was performed, and the results showed $p = 0.000$ (< 0.05), which means that there is a significant difference between the experimental and control groups. The mean rank values of 22.30 in the experimental group and 8.70 in the control group indicate that Jin's Three Needle acupuncture therapy with moxa is more effective in reducing the gastritis pain scale than without moxa.

DISCUSSION

This study shows that the combination of Jin's Three Needle acupuncture and moxibustion therapy significantly reduces pain intensity in gastritis patients compared to acupuncture alone. The average pain scale in the experimental group decreased sharply after eight therapy sessions, while the control group, which only received acupuncture, also experienced a decrease in pain, but not as much as the experimental group. These results indicate that the addition of moxibustion provides a synergistic effect in reducing gastritis pain complaints.

These findings are in line with previous studies reporting the effectiveness of acupuncture at points ST 36, PC 6, and CV 12 in reducing pain and improving digestive function (Wulandari & Prihartono, 2016; Jiu et al., 2020). The mechanism of acupuncture is believed to work through the stimulation of neuropeptide, endogenous opioid, and neurotransmitter release, which suppresses pain and increases muscle relaxation (Hidayah, 2017; Zhang et al., 2020). The addition of moxibustion can enhance this stimulation with its heat effect, which helps improve blood circulation at the acupuncture points.

The results of this study have important implications that the combination of acupuncture and moxibustion therapy can be used as a complementary therapy alternative in the management of gastritis with a focus on reducing stomach pain. This therapy has

the potential to reduce patient dependence on pharmacological drugs that carry the risk of long-term side effects. In addition, this therapy also offers a safe, non-invasive approach that is suitable for patients seeking more natural traditional treatment methods.

The limitations of this study include the difficulty of controlling external confounding factors such as diet and stress, which can affect gastritis pain. In addition, the relatively small sample size and the presence of subjects who withdrew from the study may affect the generalization of the results. Respondents' lack of prior knowledge about acupuncture therapy also influenced their attitudes and compliance during the therapy process, which could potentially affect the therapy results.

It is recommended that future studies use a larger sample size and stricter methods of controlling external variables such as diet and stress to obtain more valid and reliable results. In addition, further research is needed to explore the long-term effects of combining acupuncture and moxibustion therapy. More in-depth training and education about this therapy should also be provided to participants to improve their understanding and compliance during therapy.

Overall, this study strengthens the evidence that the combination of acupuncture and moxibustion therapy is effective in reducing the intensity of gastritis pain. This integrative therapy provides a potential alternative in gastritis management that can be widely adopted in clinical practice. This study is expected to serve as a basis for the development of more comprehensive and safe non-pharmacological therapies for gastritis patients.

CONCLUSION

This study proves that the combination therapy of Jin's Three Needle acupuncture and moxibustion is effective in reducing pain intensity in gastritis patients at Azzahro Acupuncture Blitar. This therapy provides significant results in reducing pain complaints compared to conventional treatment methods. These findings reinforce the role of complementary therapy in gastritis management and offer a safe approach with minimal side effects for patients.

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