



The Effect of Complementary Acupressure Therapy on Nausea and Vomiting After Regional Block Anesthesia (Spinal Anesthesia) in the Recovery Room Imelda Indonesian Workers General Hospital, Medan

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Abstract. Postoperative nausea and vomiting is one of the side effects that often occurs in spinal anesthesia. Nausea and vomiting affect patient morbidity such as stress, discomfort, dehydration, prolonging treatment time and increasing treatment costs. This study aims to determine the effect of acupressure therapy on the incidence of nausea and vomiting after spinal anesthesia in the recovery room at the Imelda Workers Indonesia General Hospital, Medan. This type of research is quantitative research with quasi-experimental research methods. Data reports in the province of North Sumatra showed that there were 25,602 patients who underwent surgery. Meanwhile, at the Indonesian Umim Workers Hospital in Medan, data on surgical patients for January-March 2024 totaled 666 patients, and 250 patients had spinal anesthesia. This research was carried out in February - June 2024 at the Imelda Indonesian Workers General Hospital, Medan. The research sample was taken as many as 20 respondents. incidence of nausea and vomiting after spinal anesthesia at the Imelda Workers Indonesia General Hospital, Medan. Based on the characteristics of respondents based on age, they were in the age range of 36-40 years, namely 55%, based on gender, the majority of respondents were women, namely 60%, respondents based on smoking history were the majority 65%, the distribution of respondents with a history of nausea and vomiting was the majority 55% and the majority of respondents with nausea and vomiting were 60%. The recommendation for this research is that acupressure therapy can be applied in nursing practice so that patients are able to perform it independently. For the Imelda Workers Indonesia General Hospital, Medan, it is necessary to score the risk of nausea and vomiting in patients before surgery to minimize the incidence of post-operative nausea and vomiting.

Keywords : Acupressure, Nausea, Vomiting, Spinal Anesthesia

1. INTRODUCTION

Surgery is an invasive procedure that is carried out to treat a patient's problem or disease surgically. Unpleasant effects that often arise after surgery or surgery are nausea and vomiting. Nausea is the subjective sensation of wanting to vomit without expulsive muscle movements, if severe it will be associated with increased salivary gland secretion, sweating and vasomotor disorders. Retching is the desire or urge to vomit. Due to spasmic contractions of the respiratory muscles without expelling the contents of the stomach. Vomiting is the expulsion of stomach contents through the mouth or even the nose. Vomiting conditions involve abdominal contractions which result in the expulsion of stomach contents through the mouth.

Broadly speaking, anesthesia is divided into two groups, namely general anesthesia and regional anesthesia. General anesthesia is a reversible painless state of

unconsciousness due to the administration of drugs, and eliminates pain throughout the body centrally. The difference with regional anesthesia is anesthesia for part of the body, a pain-free state without loss of consciousness (Rustiawati & Sulastri, 2021).

The World Health Organization World Alliance for Patient Safety in January began consulting with experts to develop standards to improve patient safety in surgery or anesthesia.

The World Health Organization (WHO) has introduced patient safety surgery saves lives to improve patient safety during surgery or anesthesia and reduce complications and deaths due to surgery or anesthesia at the national level, adopted by 25 countries in the world. According to WHO, Indonesia has not reported much. Based on the results of a preliminary study at the Prof. Regional General Hospital. Dr. Margono Soekarjo Purwokerto Banyumas Regency, Central Java Province In 2016, information was obtained that

The number of operations during the last 6 months with anesthesia services amounted to 4,235 cases, of which general anesthesia was 2,741 (64.7%) cases while regional spinal anesthesia was 1,494 (35.3%) cases. The monthly description of general anesthesia is 400 cases, regional anesthesia 200 cases with epidural and local block 130 cases with spinal anesthesia 70 cases recorded per month.

The impact of spinal anesthesia is usually nausea and vomiting in post-operative patients. Nausea and vomiting during spinal anesthesia can be associated with several causal factors such as sympathetic block followed by parasympathetic dominance, hypotension, decreased central nervous system perfusion, psychological changes due to anxiety, and sudden abdominal movements and administration of opioids (Apsari et al., 2023).

Data reports in North Sumatra province showed that there were 25,602 patients who underwent surgery. Meanwhile, at the Imelda Workers Indonesia General Hospital in Medan, data on surgical patients per month January – March 2024 totaled 666 patients, and 250 patients with spinal anesthesia were found. In dealing with nausea and vomiting due to post-operative anesthesia, pharmacological and non-pharmacological therapy can be used to prevent and treat nausea and vomiting. One of the antiemetic drugs in pharmacological therapy given to patients is not satisfactory as monotherapy or combination because it cannot completely improve nausea and vomiting. Non-pharmacological therapy that can be done is acupressure therapy (Of et al., 2024).

Acupressure is a healing science by pressing, massaging and massaging parts of the body to activate the circulation of vital energy or qi. Acupressure is a therapy that is easy, simple and has no side effects because it is not an invasive procedure.

The principle of healing touch in pressing body points shows caring behavior so that it can create comfort which will bring the nurse's good relationship with the patient closer (Rizqoni & Mariyam, 2023). The implementation of acupressure is to apply physical pressure to a number of points on the surface of the body which include areas of energy balance and circulation. This technique for administering acupressure is effective, safe and not invasive (Rizqoni & Mariyam, 2023).

Acupressure is a form of physiotherapy that provides massage and stimulation to special points on the body. Acupressure therapy is a very simple and effective procedure, easy to do, has few side effects and can be used to detect disorders in patients. Healing touch in acupressure shows caring behavior that can detect the therapeutic relationship between the nurse and the client. Based on the results of the study, clinical acupressure intervention can be efficacious in reducing nausea and vomiting (Novita Sari, 2020). Based on initial survey data conducted by researchers, it was reported that 664 patients underwent surgery at the Imelda Workers General Hospital in Indonesia per January–March 2024. It was reported that patients undergoing surgery experienced post-operative nausea and vomiting, but even though the symptoms were not significant, no nursing therapy had been given to treat post-operative nausea and vomiting. At the Imelda General Hospital for Indonesian workers there have never been any reports that spinal anesthesia can cause nausea and vomiting, and no independent nursing action has ever been taken to prevent or reduce the rate of postoperative nausea and vomiting.

So far, nurses have only given pharmacological drugs, namely droperidol, dexamethasone and ondasetron, to treat nausea and vomiting in post-operative patients. For this reason, the author is interested in conducting research with the title "The Effect of Complementary Acupressure Therapy on the Occurrence of Nausea and Vomiting After Regional Anesthesia Block Anesthesia (Spinal Anesthesia) in the Recovery Room of the Imelda Indonesian Workers Hospital, Medan."

2. METHODS

This type of research is quantitative research with quasi-experimental research methods. The aim is to determine the effect of complementary acupressure therapy on the incidence of nausea and vomiting after regional anesthesia block anesthesia (spinal anesthesia) in the recovery room at the Imelda Workers Indonesian Hospital, Medan in 2024

3. RESULTS

The results of research on the effect of acupressure therapy on the incidence of nausea and vomiting at the Imelda Workers Indonesia General Hospital in Medan are described in this chapter. The research was conducted at RSU Imelda Medan over a period of 1 week starting May 2024 - May 2024. The number of respondents based on calculation results was 20 people and all were willing to be respondents by signing the consent form provided. Respondents were divided into two groups, namely: 10 people for the intervention group with odd serial numbers and 10 people for the control group with even serial numbers.

1. Univariate analysis

Univariate analysis explains the characteristics of respondents which include; age, gender and duration of suffering from DM.

Variabel	n= 20 (%)
Age	
12 – 25 tahun	15%
26 – 40 tahun	55%
>41 tahun	30%
Gender	
Laki – laki	40%
Perempuan	60%
Riwayat mual muntah	
Yes	35%
No	65%
Kejadian mual muntah	
Yes	60%
No	40%

Table 2 Scale of nausea and vomiting before (pre) therapy according to Gordon on the effect of spinal anesthesia in the recovery room at the Imelda Indonesian Workers Hospital in Medan.

NO	Karakteristik	Frakuensi	Persentase
1	Tidak mual muntah	1	10%
2	Mengalami Mual saja	6	60%
3	Mengalami retching atau muntah	3	30%
4	Mengalami mual 30 menit dan muntah 2 kali	0	0%
	Jumlah	10	100%

Table 3 Scale of nausea and vomiting after (post) therapy according to Gordon on the effect of spinal anesthesia in the recovery room at the Imelda Indonesian Workers Hospital in Medan.

NO	Karakteristik	Frakuensi	Persentase
1	Tidak mual muntah	8	80%
2	Mengalami Mual saja	2	20%
3	Mengalami retching atau muntah	0	0%
4	Mengalami mual 30 menit dan muntah 2 kali	0	0%
	Jumlah	10	100%

Table 4 Control group for nausea and vomiting scale for patients after spinal anesthesia, the effect of acupressure therapy on the incidence of nausea and vomiting after spinal anesthesia in the recovery room at the Imelda Indonesian Workers Hospital in Medan.

NO	Karakteristik	Frakuensi	Persentase
1	Tidak mual muntah	4	40%
2	Mengalami Mual saja	6	60%
3	Mengalami retching atau muntah	0	0%
4	Mengalami mual 30 menit dan muntah 2 kali	0	0%
	Jumlah	10	100%

4. DISCUSSION

Based on 1 research results show that the characteristics of respondents based on age are in the majority age range 26-40 years as much as 55% and minorities 12-25 years as much as 15%. The results of this study are almost the same as previous research

which found that the age group that experienced the most PONV was age 25-39 years (Anditiawan et al., 2023). The results of this study are also in line with previous research conducted on surgical patients with spinal anesthesia which found that the incidence of PONV tends to occur in patients under 60 years of age (Lekatompessy et al., 2022). Sizemore stated that the elderly are more protective against nausea and vomiting because older patients find it easier to control nausea and vomiting than younger patients and there is a tendency to change towards acute dystonic reactions.

Based on table 2, 10% of respondents experienced nausea and vomiting before being given acupressure therapy, 60% of respondents experienced nausea, 30% of respondents experienced retching or vomiting and 0% of respondents experienced nausea for > 30 minutes and vomited > 2 times. Based on 1 research results show that the characteristics of respondents based on age are in the majority age range 26-40 years as much as 55% and minorities 12-25 years as much as 15%. The results of this study are almost the same as previous research which found that the age group that experienced the most PONV was age 25-39 years (Anditiawan et al., 2023). The results of this study are also in line with previous research conducted on surgical patients with spinal anesthesia which found that the incidence of PONV tends to occur in patients under 60 years of age (Lekatompessy et al., 2022). Sizemore stated that the elderly are more protective against nausea and vomiting because older patients find it easier to control nausea and vomiting than younger patients and there is a tendency to change towards acute dystonic reactions.

Based on table 2, 10% of respondents experienced nausea and vomiting before being given acupressure therapy, 60% of respondents experienced nausea, 30% of respondents experienced retching or vomiting and 0% of respondents experienced nausea for > 30 minutes and vomited > 2 times. Meanwhile, based on table 3, 80% of respondents who were given acupressure therapy did not experience nausea and vomiting, 20% of respondents experienced nausea, 0% of respondents experienced retching or vomiting and 0% of respondents experienced nausea for > 30 minutes and vomited > 2 times. % significant changes occur. Based on table 4, 40% of respondents in the control group did not experience nausea and vomiting, 60% of respondents experienced nausea, 0% of respondents experienced retching or vomiting and 0% of respondents experienced nausea for > 30 minutes and vomited > 2 times.

Meanwhile, based on table 4 for the intervention group before (pre) and after (post), the results of statistical tests using the Wilcoxon test show that the average score

for the intensity of nausea and vomiting before acupressure therapy was carried out in the intervention group was 1.90. In measurements after acupressure therapy, the average score for the intensity of nausea and vomiting decreased to 1.20. The difference in the average score for the intensity of nausea and vomiting before and after acupressure therapy was 0.70, with a p value of 0.000, $P < 0.05$, which means that acupressure therapy was given.

5. CONCLUSION

Based on the characteristics of respondents based on age, they are in the 26-40 year age range, namely 55%, based on gender, the majority of respondents are women, namely 60%, respondents based on smoking history, the majority are 65%, the distribution of respondents with a history of nausea and vomiting is 55%. %, and the majority of respondents with nausea and vomiting were 60%.

The difference in the average score for the intensity of nausea and vomiting before and after nausea and vomiting therapy is 0.70. Based on the control group respondents, it was assessed using the Gordon scale that the average number of respondents experiencing nausea was 60%. The results of statistical tests obtained an α value of 0.00 ($\alpha < 0.05$), so it was concluded that there was a significant/meaningful difference in the average score for nausea and vomiting before and after acupressure therapy in the Intervention group.

6. REFERENCES

- Amin, N. F., Garancang, S., & Abunawas, K. (2023). Populasi dalam penelitian merupakan suatu hal yang sangat penting, karena ia merupakan sumber informasi. *Jurnal Pilar*, 14(1), 15–31.
- Ana Ikhsan Hidayatullah, A., Early, O. L., Kusman, I., & Nandang. (2020). Pengalaman dan manajemen nyeri pasien pasca operasi diruang kemuning V di RSUP Hasan Sadikin Bandung. *Jurnal Ilmu Keperawatan dan Kebidanan*, 11(2), 187–204.
- Apsari, R. K. F., Jufan, A. Y., & Sari, D. D. (2023). Manajemen intraoperative nausea and vomiting (IONV) pada pasien seksio sesarea dengan anestesi spinal. *Jurnal Komplikasi Anestesi*, 9(2), 78–84. <https://doi.org/10.22146/jka.v9i2.8350>
- Cing, M. T. G. C., Hardiyani, T., & Hardini, D. S. (2022). Faktor yang mempengaruhi kejadian mual muntah post operasi. *Poltekita: Jurnal Ilmu Kesehatan*, 16(1), 16–21. <https://doi.org/10.33860/jik.v16i1.537>
- Djajanti, A. D., & Arfah, U. K. (2016). Pola penggunaan anestesi pada tindakan operasi

caesar di instalasi bedah rumah sakit. *Pola Penggunaan Obat Anestesi Pada Tindakan Operasi Caesar Di Instalasi Bedah Di Rumah Sakit Labuang Baji Makassar*, 53(9), 1689–1699.

- Indradata, F., Dwi Purnomo, H., Thamrin, M. H., Budi Santoso, S., Tri Arianto, A., & Suprptomono, R. (2021). Perbandingan efektivitas anestesi spinal dengan bupivacain 12,5 mg dan bupivacain 5 mg yang ditambah fentanyl 50 mcg pada seksio sesarea. *Jurnal Anestesi Obstetri Indonesia*, 4(1), 11–17. <https://doi.org/10.47507/obstetri.v4i1.55>
- Iryas, A., & Astuti, K. (2023). 3 1,2,3. 09(8), 7281–7286.
- Lestari, A. D., Sadila, A. S., Nara, A. D., Ayu, A., Putri, F., Febriani, A. N., & Barokah, A. F. (2022). Akupresur mengurangi mual muntah dalam kehamilan: Literature review. *Journal of Midwifery*, 3(1), 8–15. <https://doi.org/10.36082/jmswh.v3i1.566>
- Novita Sari, E. (2020). Mengatasi mual muntah. *Jurnal Bagus*, 02(01), 402–406.
- Of, E., On, A., Post, V., Section, C., & Anesthesia, W. S. (2024). Effect of acupressure on nausea and vomiting post cesarean section. 18, 1–12. <https://doi.org/10.36082/qjk.v18i1.1575>
- Oroh, A., Yudono, D. T., & Siwi, A. S. (2022). Pengaruh elevasi kaki terhadap tekanan darah pada pasien sectio caesaria dengan spinal anestesi di instalasi kamar bedah rumah sakit Tk. II Robert Wolter Mongisidi Manado. *Jurnal Inovasi Penelitian*, 3(7), 6857–6864.
- Purwanto, N. (2019). Variabel dalam penelitian pendidikan. *Jurnal Teknodik*, 6115, 196–215. <https://doi.org/10.32550/teknodik.v0i0.554>
- Putri, S. B., & Martin, W. (2023). Faktor internal dan eksternal yang berhubungan dengan tingkat kecemasan pasien pre-operasi mayor di ruang rawat inap bedah. *Nan Tongga Health and Nursing*, 14(1), 60–67. <https://doi.org/10.59963/nthn.v14i1.119>
- Rizqoni, D., & Mariyam, M. (2023). Pemberian akupresur untuk mengurangi mual muntah pada post apendiktomi. *Ners Muda*, 4(1), 8. <https://doi.org/10.26714/nm.v4i1.9163>
- Rustiawati, E., & Sulastri, T. (2021). Perbedaan tekanan darah antara hidrasi preload dengan tanpa preload cairan ringer laktat pada pasien pasca anestesi spinal di instalasi bedah sentral RSUD Dr. Dradjat Prawiranegara Serang. *Ilmiah Keperawatan*, 2(1), 1–8. <http://www.ejurnalmalahayati.ac.id/index.php/farmasi/article/view/5306>
- Setijanto, E., Thamri, H., & Caprianus, A. R. (2022). Perbandingan antara mobilisasi cepat dan mobilisasi lambat terhadap komplikasi neurologis pada pasien anestesi spinal. *Jurnal Anestesi Perioperatif*, 10(1), 29–34. <https://doi.org/10.15851/jap.v10n1.2462>

- Sjamsuhidayat. (2015). Gambaran persiapan perawatan fisik dan mental pada pasien pre operasi kanker payudara. *Jurnal Keperawatan Sriwijaya*, 2(1), 64–76.
- Spreckhelsen, V. T., & Chalil, M. J. A. (2021). Gambaran tingkat kecemasan pasien yang akan menjalani tindakan anestesi pada operasi elektif. *Jurnal Ilmia Kohesi*, 5(4), 32–41. <https://ejurnal.ars.ac.id/index.php/keperawatan/index>
- Susanto, C. K., Rachmi, E., & Khalidi, M. R. (2022). Faktor risiko mual dan muntah pascaoperasi pada anestesi umum di RSUD Abdul Wahab. *Journal of Agromedicine and Medical Sciences*, 8(2), 96–101. <https://jurnal.unej.ac.id/index.php/JAMS/index>
- Widiari, N. P. A., Suarjaya, I. M. A. D., & Githa, D. P. (2020). Teknik data cleaning menggunakan snowflake untuk studi kasus objek pariwisata di Bali. *Jurnal Ilmiah Merpati (Menara Penelitian Akademika Teknologi Informasi)*, 8(2), 137. <https://doi.org/10.24843/jim.2020.v08.i02.p07>