

Section: Medical Surgical Nursing

Acupressure for reducing abdominal pain in patients receiving care in the hospital

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Abstract

Abdominal colic is a visceral pain condition characterized by intermittent abdominal discomfort resulting from obstruction, distension, muscular contraction, or inflammation of intra-abdominal organs. If left untreated, this pain can significantly impair the patient's quality of life and interfere with daily activities. Acupressure therapy is recognized as an effective non-pharmacological intervention for pain reduction, achieved through stimulation of meridian points that promote endorphin release. This study aims to implement acupressure therapy as a nursing intervention to alleviate pain in patients experiencing abdominal colic. The method employed is a descriptive case study using a nursing care approach, conducted on a patient treated in the Aster 5 Room of Tidar Regional Hospital, Magelang City. Acupressure was administered over three consecutive days at the Hegu (LI4) and Zusanli (ST36) points. The results demonstrated a reduction in pain intensity from a score of 6 to 2 following the intervention. Daily evaluations indicated improvements in patient comfort and sleep quality. In conclusion, acupressure therapy proved effective as a non-pharmacological strategy for managing abdominal colic pain and holds potential for broader integration into clinical nursing practice.

Keywords: Complementary therapy, acupressure, abdominal pain, hospital care, healthcare services

Introduction

Abdominal pain is among the most frequent complaints requiring medical attention and is a pervasive issue for patients receiving care within the hospital environment (Lakhoo et al., 2021). It can arise from a multitude of causes, including chronic conditions, post-operative complications, gastrointestinal disorders, or acute illness exacerbation (Vaghef-Davari et al., 2019). Uncontrolled abdominal pain is not just a source of patient discomfort; it actively interferes with mobility, sleep, and participation in necessary medical procedures (Macaluso & McNamara, 2012). Furthermore, severe or persistent pain can activate the body's stress response, potentially leading to increased heart rate, elevated blood pressure, and delayed recovery (Timmers et al., 2019; Aboushaar & Serrano, 2024). The primary management strategy involves pharmacological agents, typically analgesics, which are often effective but carry risks of common side effects such as sedation, constipation, and nausea. Given these limitations, particularly the risk of opioid dependency and the potential for drug interactions in patients, reliance solely on pharmaceuticals is undesirable. Therefore, there is a critical and continuous need to identify safe, effective, and easily administered non-pharmacological therapies to supplement standard pain control protocols. These adjunct interventions are essential for providing holistic and patient-centred care.

Acupressure is an ancient therapeutic technique derived from Traditional Chinese Medicine (TCM) that involves applying manual pressure to specific points along the body's meridians to stimulate the flow of Qi (life energy) (Mehta et al., 2016; Cabo et al., 2018). Scientifically, acupressure is theorized to work by stimulating nerve fibers, which triggers the release of the body's natural pain-relieving chemicals, such as endorphins and enkephalins (Yao et al., 2025). By modulating the central nervous system, this technique helps to effectively block or diminish pain signals before they reach the brain's pain centres (Chen & Wang, 2014; Raana & Fan, 2020; Liu et al., 2021). Acupressure points located on the abdomen or distant sites, such as the wrist (PC6) or leg (ST36), are frequently targeted to address gastrointestinal discomfort and abdominal spasms. This technique is highly advantageous in a hospital setting because it is non-invasive, cost-effective, easily taught to nursing staff or patients themselves, and requires no specialized equipment. The successful use of acupressure in managing other types of acute and chronic pain suggests a strong potential for its application in alleviating various forms of abdominal discomfort. Therefore, integrating this simple yet powerful technique into routine care could significantly improve inpatient pain management efficacy (Shourabi et al., 2024).

Despite the theoretical underpinnings and general evidence supporting acupressure for pain, there is a lack of specific, documented case studies illustrating its practical application and rapid clinical effect in managing the diverse etiology of abdominal pain within a busy hospital ward. A case study provides the necessary detailed, real-world

context for assessing the feasibility and immediate outcome of a complementary therapy on a unique patient's experience. This approach allows for the meticulous tracking of subjective pain scores (e.g., using a Numeric Rating Scale) and the patient's analgesic use before and immediately following the acupressure intervention. Documenting the specific abdominal pain aetiology, the selected acupressure points, and the patient's individual response is crucial for generating evidence-based protocols. Such detailed clinical narratives are invaluable for educating healthcare professionals and advocating for the broader integration of complementary therapies. Therefore, the objective of this case study is to evaluate the feasibility and clinical effectiveness of using acupressure to rapidly reduce abdominal pain intensity in a hospitalized patient.

Case Description

The patient in this case study is a 58-year-old Javanese Muslim woman residing in the Karet area of Magelang City. She works as an entrepreneur and lives with her family. She was admitted to Aster Room 5 of Tidar Regional Hospital, Magelang City, on January 3, 2025. Prior to hospitalization, she had experienced abdominal pain for approximately one week. Her initial attempt to relieve the discomfort involved self-medication using drugs purchased from a local shop, without undergoing a formal medical examination. As the symptoms worsened—marked by sleep disturbances, mild dizziness, and loss of appetite—the patient decided to seek treatment at the Emergency Room of Tidar Regional Hospital. Upon arrival, she appeared weak and restless, grimacing in pain, with a visibly sad facial expression. The initial assessment revealed the following vital signs: blood pressure 115/80 mmHg, body temperature 36.5°C, respiratory rate 23 breaths per minute, pulse rate 101 beats per minute, and oxygen saturation 98%. Acupressure therapy was administered over three consecutive days at the Hegu (LI4) and Zusanli (ST36) points. The intervention resulted in a reduction in pain intensity from a score of 6 to 2. Daily evaluations indicated notable improvements in the patient's comfort and sleep quality. These findings support the effectiveness of acupressure therapy as a non-pharmacological intervention for managing pain in patients with abdominal colic.

Discussion

The assessment results indicated that the patient was experiencing upper abdominal pain characterized by intermittent pressure-like sensations. Additional complaints included difficulty sleeping, mild dizziness, and anxiety regarding her health condition. Objectively, the patient appeared weak, restless, grimacing in pain, and exhibited signs of discomfort. Based on these findings, the nursing analysis concluded that the patient was experiencing upper abdominal pain with a pain intensity rated at 6 on the numeric scale. The patient's pulse rate was recorded at 101 beats per minute. The nursing diagnosis established was acute pain related to physiological injury agents, with cholecystitis identified as the underlying aetiology. Furthermore, the patient reported an inability to sleep, frequent awakenings during the night, and appeared tired and unrefreshed. These symptoms supported the diagnosis of disturbed sleep pattern related to environmental barriers (Johnson et al., 2018; Liu et al., 2021). The patient also expressed feelings of anxiety about her illness and appeared visibly restless and weak, leading to the identification of anxiety related to a situational crisis.

Based on the assessment data obtained by the author, one diagnostic focus was obtained that could be raised from the patient according to (SDKI, 2018) which includes the primary diagnosis of acute pain (D.0077) related to physiological injury agents, characterized by the patient complaining of pain, grimacing, appearing restless, and having an increased pulse. The second diagnosis is sleeping pattern disturbance (D.0055) related to environmental barriers and pain, characterized by the patient complaining of not being able to sleep, appearing tired, and frequently waking up at night, and the third diagnosis is anxiety (D.0080) related to situational crises, characterized by the patient expressing worry, appearing restless, and having difficulty sleeping. The problem experienced by the patient is sleep pattern disturbance based on the data obtained, the author prioritizes the diagnosis of acute pain because it is a basic human need that must be met immediately so as not to interfere with other basic human needs.

Nursing interventions are arranged based on established nursing diagnoses with reference to the Indonesian Nursing Intervention Standards (SIKI). The main problem found in this case is acute pain due to physiological injury agents. From the assessment data, it was found that the patient complained of pain like being pressed on the lower abdomen with a scale of 6, the pain came and went, the patient complained of difficulty sleeping, weakness, the patient looked restless, her face was tired and less fresh, the patient looked weak. The prioritized diagnosis was then prepared a nursing plan to address the problem with the objectives and criteria for outcomes that were achieved. The preparation of nursing plans (interventions) and outcome criteria for clients refers to SIKI and SLKI which are the basis of the nursing process. In the diagnosis of acute pain related to physiological injury agents, it is characterized by the patient complaining of pain, the patient appears to be grimacing, restless and has difficulty sleeping (D.0077) with the achievement of SLKI, namely the level of pain (L.08066) with the outcome criteria of pain complaints decreasing by 5, Grimacing decreasing by 5, Restlessness decreasing by 5. The intervention quoted from SIKI is pain management (L.08238), namely identifying the location, characteristics, and scale of pain with PQRST, providing non-pharmacological therapy such as acupressure at the *hegu* and *zusanli* points, explaining strategies for relieving pain (acupressure), collaboration in providing analgesics.

The implementation carried out on the diagnosis of acute pain due to physiological injury agents (D.0077) was carried out for 3 days in the aster room 5. On the 1st day, January 7, 2025, the author carried out the implementation, namely at 08.00 to identify the location, characteristics and scale. Pain with PQRST, at 09.10 AM collaborated with analgesic administration, at 12.00 explained pain strategies, at 08.30 provided non-pharmacological therapy such as deep breathing relaxation and acupressure at the *hegu* and *zusanli* points by positioning the patient comfortably, applying lubricant to the acupressure points namely the *hegu* and *zusanli* points, then doing a 30x circular massage, asking the patient whether the pressure given was comfortable or not, when doing acupressure the author also educated the family about the acupressure given so that the family also understood and could practice it, then when finished cleaning and tidying the patient. This therapy can be done 2x a day, or if pain comes it can be a strategy to relieve pain. Day 2 on January 8, 2025 still providing acupressure, the implementation was carried out at 09.05 Identifying Location, Characteristics and Scale Pain with PQRST, at 09.10 collaborated with analgesic administration, at 12.20 explained pain strategies, at 10.10 provided non-pharmacological therapy such as deep breathing relaxation and acupressure at the *hegu* and *zusanli* points by positioning the patient comfortably, applying lubricant to the acupressure points namely the *hegu* and *zusanli* points, then doing a 30x circular massage, asking the patient whether the pressure given was comfortable or not, asking the patient and family whether they understood the acupressure points that had been given and practiced. If finished, clean and tidy the patient. This therapy can be done 2x a day, or if pain comes it can be a strategy to relieve pain. On the third day, acupressure therapy was still provided. Implementation was carried out at 8:10 AM to identify the location, characteristics, and scale of the pain. Pain with PQRST, at 11:15 explaining pain strategies, at 08:20 providing non-pharmacological therapy such as deep breathing relaxation and acupressure at the *hegu* and *zusanli* points by positioning the patient comfortably, applying lubricant to the acupressure points namely the *hegu* and *zusanli* points, then doing a 30x circular massage, asking the patient whether the pressure given is comfortable or not, asking the patient and family whether they understand the acupressure points that have been given and practiced. If finished, clean. This therapy can be done 2x a day, or if pain comes it can be a strategy to relieve pain. The implementation carried out by the author is acupressure therapy which aims to reduce pain in patients.

The evaluation stage is the final stage in the nursing process; the author assesses the extent to which success has been achieved in providing nursing care by comparing the results of nursing care with the previously prepared outcome criteria. Evaluation is carried out by assessing the development and effectiveness of nursing actions during the nursing care program. In the diagnosis of acute pain due to physiological injury agents (D.0077) the problem has not been resolved on the 1st day on January 6, 2025 at 13.30 PM because the patient has just understood the acupressure therapy given with the results of the patient still saying that the abdominal pain feels like being pressed but the scale has decreased to 5. The patient still appears to be grimacing in pain, anxiety has decreased, with vital signs of blood pressure: 113/78mmHg, Pulse: 87x/minute. On the second day, January 8, 2025, at 1:30 PM, the patient reported that the pressure-like pain had decreased to a scale of 4. He reported that he had slept better at night, although he was still awake. He appeared slightly calmer, and his grimacing and restlessness had decreased. The patient and his family stated that they understood acupressure and practiced it independently. His vital signs were blood pressure 114/88 mmHg and pulse 99 beats/minute. Day 3 The patient and family were able to perform acupressure therapy and resolved on the 3rd day, indicated by the patient saying she was better, the abdominal pain felt like pressure had significantly reduced with a scale of 2, the patient said she could sleep better, and was able to perform acupressure therapy independently. The patient looked fresher, grimacing and restlessness were not visible with vital signs of blood pressure: 110/78, Pulse: 91x/minute.

Conclusion

Based on the research findings, the application of acupressure therapy to reduce pain in abdominal colic patients treated in Aster Room 5 of Tidar Regional Hospital, Magelang City, demonstrated positive outcomes. Initial assessment revealed that the patient experienced intermittent upper abdominal pain described as pressure, rated at a pain scale of 6. The patient also reported difficulty sleeping and appeared weak, restless, and grimacing in pain. Following the assessment, a nursing diagnosis of acute pain related to physiological injury agents was established. As part of the nursing care plan, interventions were guided by the Indonesian Nursing Outcome Standards (SLKI), focusing on pain level indicators, and the Indonesian Nursing Intervention Standards (SIKI), specifically pain management through acupressure therapy. The intervention involved administering acupressure twice daily, targeting 30 pressure points over a three-day period. By the third day, nursing evaluation indicated that the goal of managing acute pain related to physiological injury agents had been achieved. In conclusion, acupressure therapy proved to be an effective non-pharmacological intervention for reducing pain in patients with abdominal colic.

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