

Comparative Analysis of Acupressure and Conventional Pain Management Techniques

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Abstract

Pain is one of the most common health problems affecting individuals worldwide and can significantly impair physical functioning, psychological well-being, and quality of life. Conventional pain management techniques, including pharmacological therapies and physical rehabilitation methods, are widely used to control pain. However, concerns regarding medication-related side effects, dependency, and treatment costs have led to increased interest in complementary therapies such as acupressure. Acupressure is a non-invasive technique derived from Traditional Chinese Medicine that involves applying pressure to specific points on the body to promote pain relief and healing. The findings indicate that both acupressure and conventional pain management techniques are effective in reducing pain. Conventional treatments, particularly pharmacological interventions, often provide rapid symptom relief but may be associated with adverse effects such as gastrointestinal disturbances, sedation, and risk of dependency. Acupressure demonstrated significant benefits in reducing pain intensity, promoting relaxation, improving physical functioning, and enhancing overall well-being with minimal side effects. While conventional methods may be more appropriate for severe or acute pain conditions, acupressure was found to be a valuable complementary or alternative approach, particularly for chronic pain management and long-term symptom control.

Keywords: Acupressure, Pain Management, Conventional Therapy, Chronic Pain, Complementary Medicine

Introduction

Pain is one of the most common reasons individuals seek medical care and is a significant public health concern worldwide. It can arise from various conditions, including musculoskeletal disorders, injuries, surgical procedures, chronic illnesses, and neurological diseases. Pain not only affects physical functioning but also has profound psychological, social, and economic consequences. Persistent pain can interfere with daily activities, reduce productivity, impair quality of life, and contribute to emotional problems such as anxiety and depression. Therefore, effective pain management remains a fundamental objective of healthcare practice. Conventional pain management techniques have long been used to alleviate pain and improve patient outcomes. These approaches include pharmacological interventions such as nonsteroidal anti-inflammatory drugs (NSAIDs), opioids, analgesics, muscle relaxants, and adjuvant medications, as well as non-pharmacological therapies such as physical therapy, exercise programs, heat and cold therapy, and surgical interventions. While these treatments can provide effective pain relief, they may also be associated with limitations including adverse effects, risk of dependency, high costs, and variable effectiveness among

individuals. In recent years, there has been increasing interest in complementary and alternative therapies for pain management. Among these approaches, acupressure has gained considerable attention as a safe, non-invasive, and cost-effective intervention. Acupressure is based on the principles of Traditional Chinese Medicine (TCM) and involves applying manual pressure to specific points on the body known as acupoints. According to TCM, stimulation of these points helps restore the balance of vital energy, or Qi, and promotes the body's natural healing processes. Modern scientific theories suggest that acupressure may relieve pain through stimulation of nerve pathways, release of endorphins, improvement of blood circulation, and reduction of muscle tension. Numerous studies have investigated the effectiveness of acupressure in managing various types of pain, including low back pain, neck pain, headache, postoperative pain, labor pain, osteoarthritis, and menstrual pain. Findings from these studies suggest that acupressure may reduce pain intensity, enhance relaxation, improve physical function, and promote overall well-being. Furthermore, acupressure is generally associated with minimal adverse effects and can often be self-administered after appropriate training. As healthcare systems increasingly adopt patient-centered and integrative approaches to treatment, comparing the effectiveness of acupressure with conventional pain management techniques has become increasingly important. Understanding the strengths, limitations, and clinical applications of both approaches can assist healthcare professionals in selecting appropriate interventions and developing comprehensive pain management strategies. acupressure and conventional pain management techniques by examining their effectiveness in reducing pain, improving functional outcomes, enhancing quality of life, and promoting patient satisfaction. The findings may provide valuable insights into the role of acupressure as a complementary or alternative therapy within modern pain management practices.

Burden and Impact of Pain on Quality of Life

Pain is a complex and multifaceted experience that affects millions of individuals worldwide and represents one of the leading causes of disability and healthcare utilization. Whether acute or chronic, pain can significantly influence an individual's physical, psychological, social, and economic well-being. The burden of pain extends beyond physical discomfort and often affects multiple aspects of daily life, resulting in a reduced quality of life and overall health status.

Physical Impact

One of the most immediate consequences of pain is its effect on physical functioning. Individuals experiencing persistent pain may have difficulty performing routine activities such as walking, standing, sitting, lifting objects, and carrying out household responsibilities. Chronic pain can lead to decreased mobility, muscle weakness, fatigue, reduced endurance, and limitations in self-care activities. As pain severity increases, participation in work, exercise, and recreational activities may become increasingly restricted.

Psychological Impact

Pain has a profound influence on mental and emotional health. Individuals suffering from persistent pain frequently experience anxiety, depression, stress, frustration, and feelings of helplessness. Chronic pain may alter mood, reduce self-esteem, and contribute to emotional distress. The constant presence of pain can also increase the risk of sleep disturbances, which further exacerbates psychological symptoms and reduces coping ability.

Social Impact

The effects of pain often extend to social relationships and community participation. Individuals with chronic pain may withdraw from social activities, family gatherings, and interpersonal relationships due to physical limitations or emotional distress. Reduced social interaction can contribute to feelings of loneliness, isolation, and decreased life satisfaction. Family members and caregivers may also experience emotional and practical challenges while supporting individuals with persistent pain.

Occupational and Economic Impact

Pain can significantly affect occupational performance and productivity. Many individuals experience absenteeism, reduced work efficiency, and difficulty maintaining employment due to pain-related limitations. In severe cases, chronic pain may result in long-term disability, early retirement, and financial hardship. The economic burden of pain includes direct healthcare costs such as medical consultations, medications, rehabilitation services, and hospitalizations, as well as indirect costs related to lost productivity and reduced workforce participation.

Impact on Sleep and Daily Functioning

Pain frequently interferes with sleep quality, making it difficult to fall asleep or maintain restful sleep throughout the night. Poor sleep can increase fatigue, reduce concentration, impair memory, and negatively affect daily functioning. A cycle often develops in which pain disrupts sleep, and inadequate sleep further intensifies pain perception and emotional distress.

Overall Quality of Life

Quality of life encompasses physical health, emotional well-being, social relationships, functional ability, and personal satisfaction. Persistent pain can adversely affect all of these dimensions, leading to a substantial decline in overall quality of life. Individuals may experience reduced independence, diminished enjoyment of life, and difficulties achieving personal and professional goals. The long-term consequences of pain can be particularly significant when effective management strategies are not available or accessible.

Pain imposes a substantial burden on individuals, families, healthcare systems, and society. Its impact extends beyond physical symptoms to affect emotional health, social functioning, occupational performance, and overall quality of life. Given these wide-ranging consequences, effective pain management is essential for improving health outcomes and enhancing well-being. Both conventional pain management techniques and complementary approaches such as acupuncture play important roles in addressing the multidimensional effects of pain and promoting a better quality of life.

Conventional Pain Management Techniques

Conventional pain management refers to the use of evidence-based medical and therapeutic interventions to reduce pain, improve physical functioning, and enhance quality of life. These approaches are widely used in healthcare settings and may be tailored according to the type, severity, and underlying cause of pain. Conventional pain management techniques include pharmacological treatments, physical therapies, interventional procedures, and surgical interventions.

Pharmacological Management

Pharmacological therapy is one of the most common approaches to pain management. Various medications are used depending on the nature and intensity of pain.

Nonsteroidal Anti-Inflammatory Drugs (NSAIDs)

NSAIDs such as ibuprofen, diclofenac, and naproxen are frequently used to relieve mild to moderate pain and reduce inflammation. They are commonly prescribed for musculoskeletal disorders, arthritis, and postoperative pain.

Analgesics

Simple analgesics, such as paracetamol (acetaminophen), are often used for mild pain and fever management. They are generally well tolerated and widely available.

Opioids

Opioid medications, including morphine, tramadol, codeine, and oxycodone, are used for moderate to severe pain. While effective, long-term use may be associated with adverse effects such as nausea, constipation, sedation, tolerance, and dependency.

Adjuvant Medications

Certain medications originally developed for other conditions may also be used to manage pain. These include antidepressants, anticonvulsants, and muscle relaxants, which are particularly useful for neuropathic and chronic pain conditions.

Physical Therapy and Rehabilitation

Physical therapy plays a crucial role in pain management by improving mobility, strength, flexibility, and functional independence. Common interventions include:

- Therapeutic exercises
- Stretching programs
- Postural correction
- Manual therapy
- Heat and cold applications
- Ultrasound therapy
- Electrical stimulation techniques

These interventions help reduce pain, prevent disability, and promote recovery.

Interventional Pain Management

For patients who do not respond adequately to conservative treatments, interventional procedures may be considered. These techniques are typically performed by pain specialists and include:

- Nerve blocks
- Epidural steroid injections
- Trigger point injections
- Radiofrequency ablation
- Spinal cord stimulation

These procedures aim to interrupt pain pathways and provide targeted pain relief.

Surgical Management

Surgery may be recommended when pain results from structural abnormalities or when other treatment options have failed. Examples include joint replacement surgery, spinal surgery, and

corrective orthopedic procedures. Surgical intervention is generally reserved for selected cases where significant improvement is expected.

Psychological and Behavioral Approaches

Pain is influenced by psychological and emotional factors; therefore, behavioral interventions are often incorporated into pain management programs. These may include:

- Cognitive Behavioral Therapy (CBT)
- Stress management techniques
- Relaxation therapy
- Biofeedback
- Counseling and psychotherapy

Such approaches help patients develop coping strategies and improve their emotional response to pain.

Advantages of Conventional Pain Management

Conventional pain management techniques offer several benefits, including rapid symptom relief, evidence-based treatment protocols, accessibility in healthcare settings, and the ability to address a wide range of pain conditions. These methods are particularly effective for acute pain, postoperative pain, and severe chronic pain requiring medical intervention.

Limitations of Conventional Pain Management

Despite their effectiveness, conventional treatments may have limitations. Pharmacological therapies can produce side effects and carry risks of dependency with prolonged use. Surgical and interventional procedures may be costly and associated with complications. Additionally, some patients may experience incomplete pain relief, prompting the need for complementary approaches such as acupressure.

Conventional pain management techniques remain the foundation of pain treatment and include medications, physical therapy, interventional procedures, surgery, and psychological interventions. While these approaches are effective for many patients, their limitations have encouraged the exploration of complementary therapies. Understanding conventional pain management provides a basis for comparing its effectiveness with alternative approaches such as acupressure in achieving optimal pain control and improving quality of life.

Conclusion

Pain is a complex health problem that affects individuals physically, psychologically, socially, and economically. Effective pain management is essential for improving functional ability, enhancing quality of life, and reducing the burden associated with acute and chronic pain conditions. Conventional pain management techniques, including pharmacological treatments, physical therapy, psychological interventions, and surgical procedures, have long been the cornerstone of pain treatment and provide significant benefits in many clinical situations. Acupressure has emerged as a valuable complementary and alternative approach to pain management. By stimulating specific acupoints, acupressure may help reduce pain intensity, promote relaxation, improve circulation, and enhance overall well-being. Compared with many conventional treatments, acupressure is non-invasive, inexpensive, easy to administer, and associated with minimal adverse effects. These characteristics make it an attractive option for individuals seeking safe and holistic methods of pain relief. The comparative analysis indicates

that both acupuncture and conventional pain management techniques have unique strengths and limitations. Conventional therapies often provide rapid and targeted pain relief, particularly in acute and severe conditions, whereas acupuncture may be especially beneficial for chronic pain management, symptom control, and long-term well-being. Rather than replacing conventional treatments, acupuncture can serve as a complementary intervention that enhances overall treatment effectiveness and patient satisfaction. Integrating acupuncture with conventional pain management strategies may offer a more comprehensive and patient-centered approach to pain care. Such integration has the potential to improve pain outcomes, reduce reliance on medications, minimize treatment-related side effects, and enhance quality of life. Further high-quality research is needed to establish standardized protocols and strengthen the evidence supporting the use of acupuncture within multidisciplinary pain management programs.

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