

The Role of Traditional Chinese Medicine in Physical Medicine and Rehabilitation: Clinical Outcomes in Patients Treated at Techirghiol Sanatorium (2024–2025)

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Disclosure statement

Model

I have relevant financial relationship(s) with some of the products described, reviewed, evaluated, or compared in this presentation.

- Financial
 - Executive Vice President/Medical Representative of Marketing/Research and Development at (Name of the Company)
 - Dr X received a speaking fee for this presentation from the Traumatic Brain Injury Association/Name of company (example) ...
 - Projects acknowledged as financial support
- Nonfinancial
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I have no actual or potential conflict of interest in relation to this program/presentation.

Introduction

- Chronic musculoskeletal pain represents a major global health burden, significantly affecting quality of life, functional independence, and healthcare costs.
- Conventional rehabilitation strategies—including physiotherapy, electrotherapy, and pharmacological treatment—remain the cornerstone of management. However, long-term use of analgesics, particularly nonsteroidal anti-inflammatory drugs (NSAIDs), is associated with significant adverse effects.
- In this context, there is growing interest in **integrative medicine**, combining standard rehabilitation with complementary therapies such as Traditional Chinese Medicine (TCM).
- Among TCM modalities, **acupuncture** has been extensively studied and is recognized by the World Health Organization as a therapeutic option for various pain conditions.
- Several studies indexed in PubMed have demonstrated that acupuncture can produce clinically significant pain relief in chronic conditions such as low back pain, osteoarthritis, and cervical syndromes. Meta-analyses suggest that acupuncture provides **moderate but consistent analgesic effects**, superior to placebo in many cases

Acupuncture

- The mechanisms underlying acupuncture include:
- activation of endogenous opioid pathways
- modulation of neurotransmitters (serotonin, dopamine)
- central nervous system plasticity
- improvement of local microcirculation
- Furthermore, acupuncture may contribute to reducing the need for pharmacological treatment, which is particularly relevant in elderly patients and those with comorbidities.

The Balneal and rehabilitation Techirghiol Sanatorium offers a unique therapeutic environment, combining **balneotherapy (sapropelic mud)** with modern rehabilitation techniques.

- The integration of acupuncture into this setting provides an opportunity to evaluate the synergistic effects of these therapies.
- The aim of this study was to assess the role of acupuncture in reducing pain, improving quality of life, and decreasing NSAIDs consumption in patients undergoing rehabilitation

Study design

- This study was designed as a **prospective observational clinical study**, conducted between January 2024 and December 2025.
- Patients were evaluated at two time points:
- baseline (before treatment)
- post-treatment (after two hospitalization cycles)
- The study followed principles consistent with clinical observational research and rehabilitation practice.

Study design

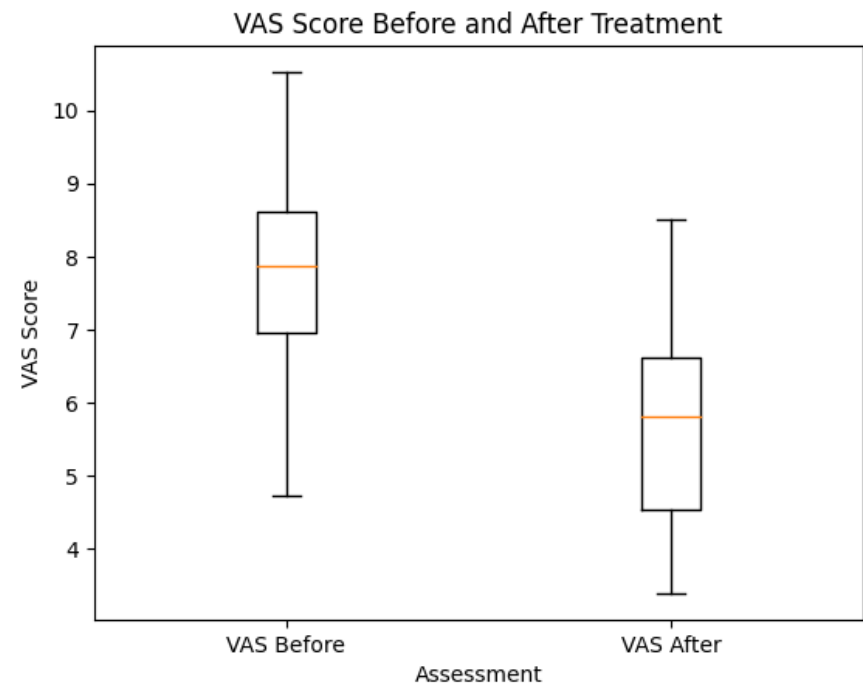
- All patients underwent a **multimodal rehabilitation program**, including:
- **Balneotherapy**
 - sapropelic mud therapy from Techirghiol Lake
 - thermotherapy and hydrotherapy
- **Physiotherapy and electrotherapy**
 - TENS, ultrasound, magnetic therapy
- **Acupuncture (TCM)**
 - 5–10 sessions per admission
 - standardized acupuncture points adapted to pathology
- performed by trained medical personnel

Study design

- **Pain intensity**
 - assessed using **Visual Analog Scale (VAS: 0–10)**
- **Quality of life**
 - assessed using **EQ-5D index**
- **NSAIDs consumption**
 - evaluated as relative percentage reduction

Results

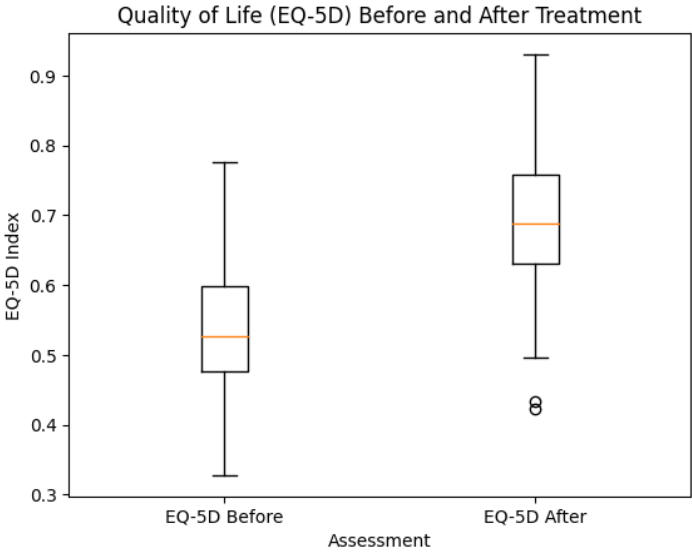
Parameter	Initial (Mean ± SD)	Final (Mean ± SD)	% Change	p-value
VAS	7.8 ± 1.2	5.4 ± 1.3	↓30%	<0.01



Results

Parameter	Initial (Mean ± SD)	Final (Mean ± SD)	% Change	p-value
EQ-5D	0.55 ± 0.10	0.70 ± 0.10	↑ 27%	<0.01

50% of patients reported improved quality of life



Results

Parameter	Initial	Final	% Change	p-value
NSAIDs use	100%	82%	↓18%	<0.05

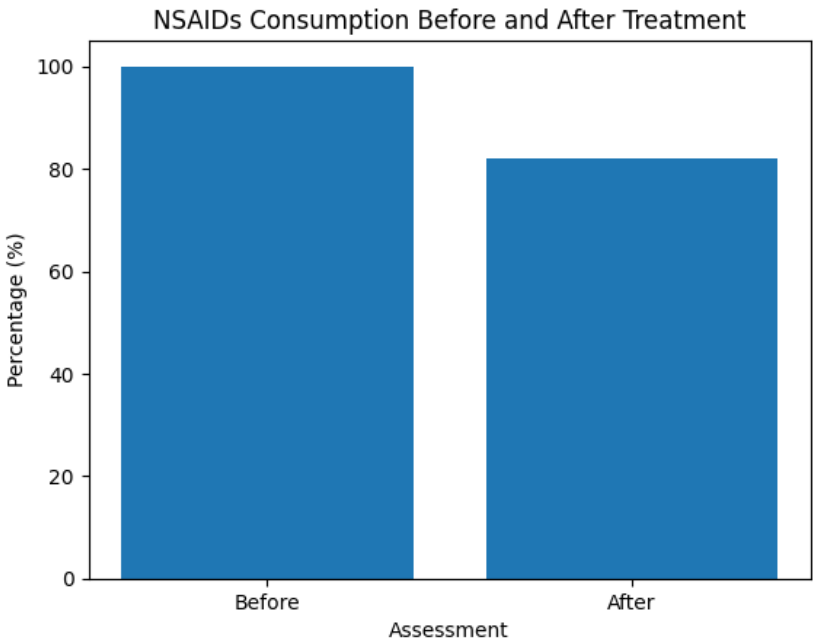
Significant reduction in medication use
Indicates decreased dependence on pharmacological
pain control

Data presented as **mean ± standard deviation**

Paired comparison (before vs after)

Statistical significance set at **p < 0.05**

Analysis performed using standard statistical methods for
clinical data



Discussion

- The findings of this study support the growing body of evidence indicating that acupuncture plays a significant role in the management of chronic pain within rehabilitation settings.
- The **30% reduction in VAS scores** observed in our study is consistent with multiple randomized controlled trials and meta-analyses available in PubMed, which report clinically meaningful reductions in pain intensity following acupuncture treatment.
- For example:
 - studies on chronic low back pain demonstrate sustained pain relief
 - osteoarthritis trials show improved joint function and reduced pain
 - cervical pain studies highlight improved mobility and decreased muscle tension
- The improvement in **EQ-5D scores (27%)** reflects not only pain reduction but also enhanced functional capacity and overall well-being. This aligns with international data suggesting that acupuncture positively influences both physical and psychological

Discussion

- One of the most important findings of this study is the **18% reduction in NSAIDs consumption**. This outcome has significant clinical implications, as long-term NSAID use is associated with:
 - gastrointestinal complications
 - renal impairment
 - cardiovascular risks
- Reducing reliance on pharmacological therapy represents a major advantage, particularly in elderly populations commonly seen in rehabilitation centers.
- The synergistic effect observed in this study can be explained by the interaction between:
 - **balneotherapy** → anti-inflammatory and metabolic effects
 - **physiotherapy** → functional restoration
 - **acupuncture** → neuromodulation and analgesia
- Together, these interventions create a **multimodal therapeutic strategy**, which is increasingly recommended in modern rehabilitation medicine.
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Conclusions

- Acupuncture represents an **effective adjunct therapy** in physical medicine and rehabilitation programs.
- The integration of Traditional Chinese Medicine into standard rehabilitation resulted in:
 - **significant pain reduction (~30%)**
 - **improvement in quality of life (~27%)**
 - **reduction in NSAIDs consumption (~18%)**
- The decrease in NSAIDs use suggests a **reduced dependency on pharmacological treatment**, which is clinically relevant given the potential adverse effects of long-term medication.
- The combination of **balneotherapy, physiotherapy, and acupuncture** provides a **synergistic therapeutic effect**, enhancing overall patient outcomes.
- Integrative rehabilitation approaches may represent a **safe, effective, and sustainable strategy** for managing chronic musculoskeletal conditions.

- **Acupuncture should not be seen as an alternative, but as a complementary tool that enhances the effectiveness of modern rehabilitation.”**

Thank you!

