

EFFECT OF INTERFERENTIAL THERAPY IN A PATIENT WITH LOW BACK PAIN: A CASE REPORT

Dr Praveen Kumar N¹, Dr Mahantesh Biradi², Dr Yogesh S Kulkarni³

Postgraduate scholar¹, Associate professor², Professor³

Department of Physiotherapy,

BVVS College of Physiotherapy, Bagalkot.

Abstract

Low back pain is a common musculoskeletal complaint that affects daily activities and functional performance. Interferential Therapy (IFT) is a commonly used electrotherapeutic modality for pain management. This case report describes the outcome of IFT in a 35-year-old male presenting with low back pain. The patient underwent seven consecutive sessions of IFT over the lumbar region. Pain intensity was assessed using the Visual Analogue Scale (VAS). Following treatment, the patient's pain score reduced from 8/10 to 3/10. The patient reported improved comfort during daily activities. This case report suggests that IFT may be beneficial in reducing pain in individuals with low back pain.

Keywords: Low back pain, Interferential Therapy, Electrotherapy, Pain Management, Case Report

Introduction

Low back pain is among the most frequent musculoskeletal conditions encountered in clinical practice. It can affect mobility, work performance, and quality of life. Various physiotherapy modalities are used to manage low back pain, including exercise therapy, manual therapy, and electrotherapy¹.

Interferential Therapy (IFT) utilizes medium-frequency electrical currents that intersect within body tissues, producing therapeutic low-frequency stimulation. The treatment is commonly employed to reduce pain, improve local circulation, and promote tissue healing. This case report describes the clinical outcome of a patient with low back pain treated using IFT².

Case Presentation

A 45-year-old male presented to the physiotherapy outpatient department with complaints of pain in the lower back for approximately three months. The pain was gradual in onset and increased during prolonged standing, forward bending, and lifting heavy objects.

There was no history of trauma, radiating pain to the lower limbs, bowel, or previous spinal surgery.

General examination :

Temperature : 97.3⁰ F

Pulse : 84 bpm

RR : 16 cpm

Height : 171 cm

Weight : 68 kg

BMI : 23.3 kg/m²

Clinical Findings :

- General condition: Stable

- Gait: Normal

- Lumbar paraspinal tenderness: Present

- Baseline Visual Analogue Scale (VAS): 8/10

Based on clinical evaluation, the patient was managed conservatively with Interferential Therapy.

Intervention

The patient received Interferential Therapy using a quadripolar electrode arrangement over the lumbar region.

Treatment Parameters

- Carrier Frequency: 4000 Hz
- Beat Frequency: 100 Hz
- Electrode Placement: Quadripolar placement around the painful lumbar region
- Treatment Duration: 20 minutes per session
- Number of Sessions: 7 consecutive daily sessions

The patient was additionally advised regarding proper posture and activity modification during the treatment period.

Outcome Assessment

Pain intensity was assessed using the Visual Analogue Scale (VAS).

Assessment	VAS Score
Before Treatment	8/10
After Treatment	3/10

Following completion of seven sessions, the patient reported a substantial reduction in pain intensity and improved ease during routine activities such as standing, walking, and bending.



Figure 1: placing the electrodes



Figure 2: IFT procedure

No adverse effects were observed during the treatment period.

Discussion

Interferential Therapy is widely utilized in physiotherapy for pain reduction. The analgesic effects of IFT is due to stimulation of sensory nerve fibers, modulation of pain transmission pathways, and enhancement of local blood circulation.

In the present case, a notable reduction in pain intensity was observed following seven consecutive sessions of IFT. The improvement noted in the VAS score suggests that IFT may be effective in managing symptoms associated with low back pain.

Previous studies have reported beneficial effects of interferential current therapy in reducing pain and improving patient comfort. The findings of the present case are consistent with these observations.

Conclusion

This case report demonstrates that Interferential Therapy may be effective in reducing pain in patients presenting with low back pain. The patient experienced significant improvement following seven consecutive treatment sessions without any adverse effects. Further studies involving larger patient populations are required to establish the long-term effectiveness of this modality.

Patient Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying clinical information.

Conflict of Interest

The authors declare no conflict of interest.

References

1. Poitras S, Brosseau L. Evidence-informed management of low back pain with electrotherapy modalities. *Spine Journal*. 2008;8(1):226–233.
2. Albornoz-Cabello M, Maya-Martín J, Domínguez-Maldonado G, Espejo-Antúnez L, Heredia-Rizo AM. Effect of interferential current therapy on pain perception and disability level in subjects with low back pain: a randomized controlled trial. *Clinical Rehabilitation*. 2017;31(2):242–249.

Copyright & License:

© Authors retain the copyright of this article. This work is published under the Creative Commons Attribution 4.0 International License (CC BY 4.0), permitting unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.