DOI: 10.7860/JCDR/2025/80480.22664

A Study to Detect Effectiveness of Therapeutic Laser on Trigeminal Neuralgia: A Literature Review

JYOTI PRIYA[1]*, NISHCHINT BANGA[2], SUPRIYA AWASTHI[3], PALLAVI PRAKASH[4], DIKSHA[5]

ABSTRACT

Introduction: Trigeminal neuralgia (TN) is a prevalent and debilitating neuralgia affecting the craniofacial region. Due to the limited efficacy of traditional treatments, there is growing interest in alternative therapies like laser therapy for TN management.

Purpose: This study aimed to investigate the effects of laser therapy on trigeminal neuralgia through a comprehensive literature review.

Participants: Adult patients diagnosed with chronic trigeminal neuralgia unresponsive to conventional treatments were included, with sample sizes ranging from 17 to 45, categorized by the type of laser therapy administered.

Methods: A systematic search was performed across pubmed, Scopus, Web of Science, Science Direct, and Google Scholar from 1980 to 2024 using the keywords “trigeminal neuralgia” and “laser.” The inclusion criteria focused on experimental studies, including randomized clinical trials utilizing laser therapy for TN treatment. Out of 6,472 identified records, 20 were relevant after title and abstract reviews, with 15 articles ultimately meeting eligibility criteria for inclusion.

Results: The review indicated that low-level laser therapy is a potent and safe intervention for trigeminal neuralgia, particularly for patients resistant to standard treatments. It consistently demonstrated significant pain reduction, with some studies reporting up to 85% pain relief.

Conclusion: Laser therapy effectively alleviates pain associated with trigeminal neuralgia and enhances overall quality of life by reducing pain intensity and interference in daily activities.

Implications: These findings emphasize the need for clinicians to consider laser therapy as a viable treatment option for TN, especially in patients who have not responded to conventional therapies. Accurate diagnosis is crucial for optimizing treatment outcomes and improving patient quality of life.

Keywords: Trigeminal neuralgia, Laser therapy, Facial pain.

PARTICULARS OF CONTRIBUTORS:

1. BPT 4th Year Student, Department of Physiotherapy, School of Allied Health Sciences, Noida International University, Greater Noida, India.
2. Assistant Professor, School of Allied Health Sciences, Noida International University, Greater Noida, India.
3. Professor, School of Allied Health Sciences, Noida International University, Greater Noida, India.
4. Associate Professor, School of Allied Health Sciences, Noida International University, Greater Noida, India.
5. Assistant Professor, School of Allied Health Sciences, Noida International University, Greater Noida, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

*Jyoti Priya
BPT 4th Year Student, Department of Physiotherapy, School of Allied Health Sciences, Noida International University, Greater Noida, India.
E-mail: jyoti2002priya@gmail.com