

EDITORIAL VIEW

PAIN MANAGEMENT

Neuropathic pain: The missing link at the general physician level

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Summary: An important public health issue is neuropathic pain. It is a common, persistent, and severely disabling condition experienced by those in primary care. An important first step is an accurate diagnosis. It is the first step toward effective pain and disability reduction and management. The history may indicate the presence of pain, and a physical examination may confirm it. Medical professionals lack the skills necessary to diagnose and treat neuropathic pain, in part due to inadequate training during medical school and residency. The primary care physician is critical in avoiding delay in diagnosis, providing proper evaluation and treatment, and improving outcomes while reducing the financial burden on society economy.

Key words: General Physicians; Neuropathic Pain; Pain Management; Treatment

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The most common definition of pain is discomfort triggered by injury to the sensorimotor system of the body or by disease. The ability to perceive touch, pressure, pain, temperature, position, movement, and vibration is provided to us by our somatosensory system.¹ The nerves carrying information from the skin, muscles, and other parts of the body to the spinal cord and brain are damaged or injured in neuropathic pain (NP). The affected areas are often sensitive to touch, and the pain is sometimes described as a burning sensation. Postherpetic neuralgia, trigeminal neuralgia, painful radiculopathy, diabetic neuropathy, HIV infection, leprosy, post amputation stump pain, pain from peripheral nerve injury and stroke are common conditions associated with NP. Lesions or diseases of the somatosensory nervous system can result in altered and impaired transmission of sensory signals to the spinal cord and brain.²

The ratio of elderly people in the total population is steadily increasing due to better living conditions and disease control. Chronic health problems proportionately increase with age, and chronic pain is one of them. It is well known that chronic pain significantly affects sleep, work, mood, energy levels, and overall quality of life, and is the main reason people seek medical help.³ Neuropathic pain can result from a variety of common conditions, traumas, and treatments that damage

somatosensory pathways in the peripheral or central nervous system. Millions of people worldwide suffer

from NP, estimated to be almost 7% of the general population.⁴ It results in increased medical provider visits and medication prescriptions. Patients typically report some specific symptoms, such as burning and current-like sensation, as well as pain triggered by normally non-painful stimuli (e.g., light touch); these symptoms persist and tend to become chronic, and they also tend to show minimal response to analgesics. The victims of NP frequently suffer from sleep disturbance, anxiety, and depression; and their quality of life is worse than that of patients with chronic non-NP.⁵ It has been estimated that 40% of the people consult their general physician each year for pain; and among these, 20% have pain persistent for at least six months.⁶

The main goals of treating NP are to control the pain as much as possible and to minimize the harmful side effects. Individuals with persistent NP may be referred to a pain clinic for evaluation, treatment, and counseling about living with chronic pain. Determining the precise pathogenesis of the pain and appropriate early treatment, can improve the outcome and reduce the costs.⁷ The complexity of the presentation of chronic pain makes it difficult for the general physicians (GPs) or primary care physicians to diagnose and treat it.

The GPs play a critical diagnostic role in triage of patients for specific treatments and are usually

responsible for early pain management. Through diagnosis, therapy, follow-up, and referral, primary care physicians have the advantage of being at the forefront of patient care and can play a critical role in the treatment and prevention.⁸

Neuropathic pain is best treated with a multidisciplinary strategy. However, there are a number of treatment options that can be started at the primary care level. The treatments that are least likely to cause side effects should be tried first. However, given their presumed safety, non-pharmacologic treatments should also be considered, whenever appropriate. Evidence for conservative non-pharmacologic treatments, such as physical therapy, exercise, and transcutaneous electrical nerve stimulation (TENS), is insufficient. Simple analgesics such as acetaminophen and non-steroidal anti-inflammatory drugs (NSAIDs) are often unsuccessful in treating pure NP, although they may be helpful in treating a concurrent nociceptive condition e.g., sciatica with musculoskeletal low back pain.⁹

Similar to any other chronic disease, the management of NP requires a better patient-physician relationship, with an emphasis on support, patience, and patient-centered strategies. The neurologic changes that result from the underlying disease or lesion are often irreversible. Although second-line caregivers can greatly improve patient care, they do not always provide the continuity of care and long-term relationships that are possible in primary care. Therefore, primary care physicians play a critical role in helping patients with chronic pain achieve the highest possible quality of life by alleviating their pain and improving their functioning under the most challenging conditions, interdisciplinary approaches, and pain management.¹⁰

GPs play a crucial role in managing NP. However, previous quantitative research has shown that they are not convinced of this.¹¹ In addition, practice constraints such as lack of interdisciplinary teams, insufficient time, and poor links with community services may prevent GPs from managing patients with NP. Interventions are needed to support family physicians in treating NP. However, family physicians are not aware of such measures. We lack the current knowledge about how exactly the family physicians manage NP and what the reasons are for their lack of confidence. A recent study identified education about NP as a priority for the primary care physicians. A detailed understanding of current behaviors is an essential first step in developing interventions.¹² Most of the medical professionals lack the skills necessary to diagnose and treat NP; it may partly be due to inadequate training during medical schools and residency. Medical schools don't teach enough about chronic pain, and many trainees and graduates lack confidence in their competence to treat patients with this type of pain. They receive inductive

training to use their clinical expertise.¹³ Previous studies have shown that the residents are aware of training deficits in this area, and the majority of residents rate their readiness to treat chronic pain as "fair" or "poor" only.¹⁴ Although the Liaison Council of Medical Education recommends that clinical training "must cover all organ systems and include the important aspects of preventive, acute, chronic, ongoing, rehabilitative, and end-of-life care," pain management is not a clinical topic mandated in undergraduate medical education.¹⁵

The evaluation and treatment of NP has been considered a clinical challenge. The lack of clinical guidelines, including specific guidelines for GPs and easy access to clinical advice, was cited as a problem. As a result, the treatment of behavioral and psychological problems was considered a 'grey area'. GPs felt that they often make judgments in a vacuum, because there are no implementable guidelines for treating NP. It is noteworthy that there is a general lack of knowledge about the available techniques for assessing NP. A pain measurement tool would also be beneficial. This reveals a wide discrepancy between research in this area and the actual clinical practice. It appears that GPs rarely use these instruments. The lack of familiarity of GPs with pain assessment instruments is a major shortcoming in this area but may not be surprising to GPs in practice. GPs are slow to adopt assessment tools. Regardless of specialty, training in pain management should begin in medical school level and continue during postgraduate level. Early and ongoing education is needed to promote empathy in the treatment of patients who are in pain. To better promote patient-centered pain care, residency and fellowship training should give a clear awareness of each specialty's role and duties in pain management.

Conflict of interest

None declared by the author.

References

1. Jensen TS, Baron R, Haanpää M, Kalso E, Loeser JD, Rice AS, Treede RD. A new definition of neuropathic pain. *Pain*. 2011 Oct;152(10):2204-2205 [PubMed] DOI: [10.1016/j.pain.2011.06.017](https://doi.org/10.1016/j.pain.2011.06.017)
2. Jensen TS, Gottrup H, Sindrup SH, Bach FW. The clinical picture of neuropathic pain. *Eur J Pharmacol*. 2001 Oct 19;429(1-3):1-11. [PubMed] DOI: [10.1016/s0014-2999\(01\)01302-4](https://doi.org/10.1016/s0014-2999(01)01302-4)
3. Committee on Advancing Pain Research, Care, and Education; Institute of Medicine. *Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research*. <https://www.uspainfoundation.org/>. Available at: <https://www.ncbi.nlm.nih.gov/books/NBK92519/>
4. Bouhassira D, Lantéri-Minet M, Attal N, Laurent B, Touboul C. Prevalence of chronic pain with neuropathic characteristics in

- the general population. *Pain*. 2008 Jun 15;136(3):380-7. [PubMed] DOI: [10.1016/j.pain.2007.08.013](https://doi.org/10.1016/j.pain.2007.08.013)
5. Finnerup NB, Haroutounian S, Kamerman P, Baron R, Bennett DL, Bouhassira D, et al. Neuropathic pain: an updated grading system for research and clinical practice. *Pain*. 2016 Aug;157(8):1599. [PubMed] PMID: [PMC4949003](https://pubmed.ncbi.nlm.nih.gov/27049003/); DOI: [10.1097/j.pain.0000000000000492](https://doi.org/10.1097/j.pain.0000000000000492)
 6. Mäntyselkä P, Kumpusalo E, Ahonen R, Kumpusalo A, Kauhanen J, Viinamäki H, Halonen P, Takala J. Pain as a reason to visit the doctor: a study in Finnish primary health care. *Pain*. 2001 Jan 1;89(2-3):175-80. [PubMed] DOI: [10.1016/s0304-3959\(00\)00361-4](https://doi.org/10.1016/s0304-3959(00)00361-4)
 7. Maniadas N, Gray A. The economic burden of back pain in the UK. *Pain*. 2000 Jan 1;84(1):95-103. [PubMed] DOI: [10.1016/S0304-3959\(99\)00187-6](https://doi.org/10.1016/S0304-3959(99)00187-6)
 8. Fornasari D. Pharmacotherapy for neuropathic pain: a review. *Pain and therapy*. 2017 Dec;6(1):25-33. [PubMed] PMID: [PMC5701897](https://pubmed.ncbi.nlm.nih.gov/305701897/); DOI: [10.1007/s40122-017-0091-4](https://doi.org/10.1007/s40122-017-0091-4)
 9. Finnerup NB, Otto M, McQuay HJ, Jensen TS, Sindrup SH. Algorithm for neuropathic pain treatment: an evidence based proposal. *Pain*. 2005 Dec 5;118(3):289-305. [PubMed] DOI: [10.1016/j.pain.2005.08.013](https://doi.org/10.1016/j.pain.2005.08.013)
 10. Haanpää ML, Backonja MM, Bennett MI, Bouhassira D, Cruccu G, Hansson PT, et al. Assessment of neuropathic pain in primary care. *Am J Med*. 2009 Oct;122(10 Suppl):S13-21.. [PubMed] DOI: [10.1016/j.amjmed.2009.04.006](https://doi.org/10.1016/j.amjmed.2009.04.006)
 11. Craig P, Dieppe P, Macintyre S, Michie S, Nazareth I, Petticrew M. Developing and evaluating complex interventions: the new Medical Research Council guidance. *BMJ*. 2008 Sep 29;337. [PubMed] PMID: [PMC2769032](https://pubmed.ncbi.nlm.nih.gov/18454667/); DOI: [10.1136/bmj.a1655](https://doi.org/10.1136/bmj.a1655)
 12. Michie S, Stralen MV, West R. The behaviour change wheel: A new method for characterising and designing behaviour change interventions The behaviour change wheel: A new method for characterising and designing behaviour change interventions, *Implement Sci*. 2011 Apr 23;6:42. [PubMed] PMID: [PMC3096582](https://pubmed.ncbi.nlm.nih.gov/21684468/); DOI: [10.1186/1748-5908-6-42](https://doi.org/10.1186/1748-5908-6-42)
 13. Yanni LM, McKinney-Ketchum JL, Harrington SB, Huynh C, Amin, BS S, Matsuyama R, Coyne P, Johnson BA, Fagan M, Garufi-Clark L. Preparation, confidence, and attitudes about chronic noncancer pain in graduate medical education. *J Grad Med Educ*. 2010 Jun;2(2):260-8. [PubMed]
 14. Wolfert MZ, Gilson AM, Dahl JL, Cleary JF. Opioid analgesics for pain control: Wisconsin physicians' knowledge, beliefs, attitudes, and prescribing practices. *Pain Medicine*. 2010 Mar 1;11(3):425-34. [PubMed] DOI: [10.1111/j.1526-4637.2009.00761.x](https://doi.org/10.1111/j.1526-4637.2009.00761.x)
 15. Liaison Committee on Medical Education (LCME) LCME accreditation standards 2008. Available at: <http://www.lcme.org/standard.htm>. Accessed September 15, 2022.

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