Neuropathic Pain and Chronic Pain: A Subset or a Subsidy?

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Abstract

This letter to editor emphasizes on the inter-relationship between neuropathic pain and chronic pain from an evidence-informed epidemiological perspective in order to facilitate a collative critical understanding on the subject of pain sciences. The biopsychosocial model and its ensuing multi-disciplinary/inter-disciplinary approaches towards assessment and management of chronic pain and neuropathic pain underpin common underlying mechanisms yet separate to distinctively identify them rather than as a single entity of chronic neuropathic pain. The anecdotal assumption that NeP was a subsidy to ChP was evidently disproven by the existing studies indicating that NeP is an important subset of ChP and has most disabling consequences and impact on quality of life than its non-neuropathic counterpart.

Keywords: Biopsychosocial model; Pain psychology; Neuroanesthesiology; Pain sciences; Pain rehabilitation.

Dear Sir,

This letter to editor emphasizes on the inter-relationship between neuropathic pain (NeP) and chronic pain (ChP) from an evidence-informed epidemiological perspective in order to facilitate a collative critical understanding on the subject of pain sciences. The bio-psychosocial model and its ensuing multi-disciplinary/inter-disciplinary approaches towards assessment and management of ChP and NeP underpin common underlying mechanisms yet separate to distinctively identify them rather than as a single entity of chronic neuropathic pain.

Only one study had used chronic neuropathic pain as a single entity; in patients with breast cancer surgery, Bokhari *et al*[1] found 23% prevalence of NeP post breast surgery which was associated with younger age, and inadequate acute pain management.

Five studies identified neuropathic pain as a subset of chronic pain by evaluating its prevalence of NeP within ChP samples such as studies by Bouhassira *et al*[2] who found a prevalence rate of 6.9% for NeP within ChP, with associations of middle-age, manual labour and rural stay; de Moraes Vieira *et al*[3] found a 10% prevalence of ChP with NeP characteristics of whom 55% reported treatment-associated dissatisfaction; Harifi *et al*[4] found a prevalence rate of 10.6% for ChP with NeP characteristics which was higher among women, elderly, illiterate respondents, and respondents from lower social class; Maguire *et al*[5] found prevalence of each NeP symptom ranged from 35-83% among chronic pain patients who underwent thoracic surgery; Toth *et al*[6] found 17.9% prevalence of NeP

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which was associated with female gender, greater belief of being economically disadvantaged, suffering of more restrictions in mobility and in usual activities, and lower EQ-5D utility scores.

Three studies evaluated prevalence of NeP within chronic low back pain (CLBP) with varying results,[7,8,9] the analyses of which is well beyond the scope of this letter.

The anecdotal assumption that NeP was a subsidy to ChP was evidently disproven by the existing studies indicating that NeP is an important subset of ChP and has most disabling consequences and impact on quality of life than its non-neuropathic counterpart.

The million-dollar question still remains unanswered: "Do we extrapolate the ChP research findings into NeP or distinctively study NeP as co-existing with ChP during individualized assessment and management of pain?"

References

1. Bokhari FN, McMillan DE, McClement S, Daeninck PJ. Pilot study of a survey to identify the prevalence of and risk factors for chronic neuropathic pain following breast cancer surgery. *Oncol Nurs Forum*. 2012; 39(2): E141-9.
2. Bouhassira D, Lantéri-Minet M, Attal N, Laurent B, Touboul C. Prevalence of chronic pain with neuropathic characteristics in the general population. *Pain*. 2008; 136(3): 380-7.
3. de Moraes Vieira EB, Garcia JB, da Silva AA, MualemAraújo RL, Jansen RC. Prevalence, characteristics, and factors associated with chronic pain with and without neuropathic characteristics in São Luís, Brazil. *J Pain Symptom Manage*. 2012; 44(2): 239-51.
4. Harifi G, Amine M, AitOuazar M, Boujemaoui A, Ouilki I, Rekkab I, *et al*. Prevalence of chronic pain with neuropathic characteristics in the Moroccan general population: a national survey. *Pain Med*. 2013; 14(2): 287-92.
5. Maguire MF, Ravenscroft A, Beggs D, Duffy JP. A questionnaire study investigating the prevalence of the neuropathic component of chronic pain after thoracic surgery. *Eur J Cardiothorac Surg*. 2006; 29(5): 800-5.
6. Toth C, Lander J, Wiebe S. The prevalence and impact of chronic pain with neuropathic pain symptoms in the general population. *Pain Med*. 2009; 10(5): 918-29.
7. El Sissi W, Arnaout A, Chaarani MW, Fouad M, El Assuity W, Zalzala M, *et al*. Prevalence of neuropathic pain among patients with chronic low-back pain in the Arabian Gulf Region assessed using the leeds assessment of neuropathic symptoms and signs pain scale. *J Int Med Res*. 2010; 38(6): 2135-45.
8. Hassan AE, Saleh HA, Baroudy YM, Abdul-Rahman KI, Najjar MW, Kazi MS, *et al*. Prevalence of neuropathic pain among patients suffering from chronic low back pain in Saudi Arabia. *Neurosciences (Riyadh)*. 2005; 10(1): 51-5.
9. Hassan AE, Saleh HA, Baroudy YM, Abdul-Rahman KI, Najjar MW, Kazi MS, *et al*. Prevalence of neuropathic pain among patients suffering from chronic low back pain in Saudi Arabia. *Saudi Med J*. 2004; 25(12): 1986-90.