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PREVALENCE OF NEUROPATHIC PAIN AND ITS ASSOCIATED FACTORS AMONG DIABETIC PATIENTS WITH CHRONIC LOWER LIMB PAIN IN A UNIVERSITY PRIMARY CARE CLINIC

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ABSTRACT

Neuropathic pain (NP), a common cause of chronic pain among diabetic patients. NP results in low quality of life among its sufferers due to various physical and psychological impacts. Appropriate mechanism-based pain treatment can be given if NP is correctly identified, resulting in better pain management. This study aimed to determine the prevalence of NP and its associated factors among diabetic patients with chronic lower limb pain at a teaching primary care clinic. This cross-sectional study involved conveniently sampled adult diabetic patients with lower limb pain for at least three months' duration. The Douleur Neuropathique 4 Questions (DN4) was used to screen for NP, whereas pain intensity was measured using the Numeric Pain Rating Scale (NPRS). The patients' sociodemographic, anthropometric measurements and blood investigation results were also collected. Multiple logistic regression was performed to identify independently associated factors with NP. The prevalence of NP was 15.7%. Moderate pain (Adj OR=13.0, 95% CI= 5.98, 27.82) and severe pain (Adj OR = 127.00, 95%CI 10.67, 1512.85) were independently associated with NP. In conclusion, moderate to severe lower limb pain was more likely due to NP among diabetic patients. NP should be considered as a diagnosis in the assessment of chronic lower limb pain among diabetic patients in the primary care setting.

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SECTION I

MANUSCRIPT

Introduction

Chronic pain (CP) is a common presenting complaint in the primary care setting (Mills, Torrance, and Smith 2016). It is defined as persistent or recurrent pain for more than three months (Treede et al. 2015). Lower limb also known as lower extremity is the limb of the body extending from the gluteal region to the foot. It consists of the thigh, the leg, and the foot (Netter 2019). Data from the American National Center for Health Statistics reported that 36.5% had chronic lower limb pain (Lucas et al. 2021). There was minimal data on the local prevalence of chronic lower limb pain. The available literature is among the HCW in Malaysia, and the prevalence of chronic lower limb pain was 18.0% (Yusoff et al. 2017). Nonsteroidal anti-inflammatory medicines (NSAIDs) are commonly used to treat chronic pain and NP (Moore et al. 2015). Opioid- based medications, on the other hand, are generally not indicated for chronic pain with NP that is not caused by cancers (Finnerup et al. 2021).

Neuropathic pain (NP) is one of the major groups of chronic pain disorders under the International Association for the Study of Pain (IASP) (Treede et al. 2015). The International Association for the Study of Pain (IASP) defines NP as "pain initiated or caused by a lesion or disease of the somatosensory system" (International Association for the Study of Pain n.d.). About one-fifth of patients suffering from CP could be suffering from NP (Cohen and Mao 2014). NP can be challenging to diagnose because they can present in various ways such as lancinating, shooting, electric-like, and stabbing pain (Cohen and Mao 2014). However, it is important to correctly identify NP during patient assessment because they may not respond well to commonly prescribed analgesics used for nociceptive pain. A correct diagnosis of NP will allow the patients to be treated with medications such as anticonvulsants (e.g. gabapentin) or tricyclic antidepressants (e.g. amitriptyline), which are highly effective for the management of NP (Alam et al. 2020). In addition, appropriate mechanism-based treatment greatly influences the outcome of pain management in NP (Mehra et al. 2014, Cohen and Mao 2014).