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Conventional management and current guidelines for painful diabetic neuropathy☆

Solomon Tesfaye[a,*], Peter Kempler[b]

[a] Diabetes Research Department, Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield, United Kingdom
[b] Department of Internal Medicine and Oncology, Semmelweis University, Budapest, Hungary

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ABSTRACT

Painful Diabetic Peripheral Neuropathy (PDN) is common, affecting around a quarter of patients both type 1 and type 2 diabetes, and can lead to significant curtailment of functionality and quality of life. Patients may present with unremitting burning, aching or "electric-shock" type pains in their feet, legs and later, in the hands. Conventional management approaches must focus not only on pain relief, but also on concurrent sleep problems, mood disorders and functionality. The mainstay of treatment is pharmacotherapy. Most current international guidelines recommend a choice of four drugs: amitriptyline, duloxetine, pregabalin or gabapentin, as initial treatment for PDN. Recent evidence from the OPTION-DM trial demonstrated that these drugs and their combinations have equivalent efficacy. Moreover, combination treatment provided significant pain relief to patients with inadequate response to the maximum tolerated dose of monotherapy. PDN refractory to pharmacotherapy can be treated with capsaicin 8% or high frequency spinal cord stimulation.

1. Introduction

Painful diabetic peripheral neuropathy (PDN) is a serious complication affecting around a quarter of people with diabetes [1,2]. With the prevalence of diabetes set to increase by epidemic proportions over the next decade, PDN will pose a major treatment challenge. PDN causes burning, deep aching, "electric shock" like, lancinating pains (described as "stabbing or knife like"); contact pain both clothing worn during the day and bedclothes (allodynia); pain on walking, sometimes described as "walking barefoot on marbles, hot sand or broken glass"; sensations of heat or cold in the feet; a persistent achy feeling in the and cramp-like sensations in the legs [3]. With advanced disease, the pain can extend above the feet and may involve the whole of the legs; in such cases, there is often upper limb involvement as well [3].

The holistic management of a patient with distal symmetrical polyneuropathy (DSPN) involves: treatment of symptoms (such as, neuropathic pain, comorbid mood disorders, insomnia, comorbid autonomic symptoms and unsteadiness/falls); strategies aimed at the prevention of progression of DSPN by management of cardiometabolic risk factors; and addressing foot complications [3]. The biopsychosocial model of pain proposes that biological factors are important in the appraisal and perception of abnormal sensations generated by damaged nerves. These appraisals and behavioural responses are, in turn, influenced by social or environmental factors, such as hormone production, autonomic nervous system activity, etc. The management of chronic pain, therefore, requires the use of biopsychosocial approach that appreciates that persistent pain is a disease rather than a symptom and that all influencing factors must be addressed [4]. Although the first point of consultation might be with a general practitioner, internal medicine specialist, endocrinologist, neurologist or pain specialist, ideally a multimodal /multidisciplinary team approach, with tailored involvement of specialist nurses, podiatrists, psychologists, physical therapists, orthotists and pain specialists is recommended to provide personalised and enhanced patient care. In this brief article we will look at conventional management of PDN with an emphasis on recent advances.

2. Empathic approach

Although PDN patients present with a wide spectrum and severity of neuropathic symptoms, moderate-to-severe (i.e. Neuropathic Pain

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* Corresponding author at: Consultant Physician/Honorary Professor of Diabetic Medicine University of Sheffield, Royal Hallamshire Hospital, Glossop Road, Sheffield S10 2JF, United Kingdom.
E-mail address: solomon.tesfaye@sth.nhs.uk (S. Tesfaye).

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