

Severity of Diabetes in Patients with Allodynia and Hyperalgesia as Major Symptoms

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Description

Diabetic Neuropathy and Diabetic Neuropathic Pain (DNP) are common complications of long-term diabetes. DNP severs an intractable and characterized by spontaneous painful sensations (e.g., burning or sharp pain) cutaneous allodynia and hyperalgesia, impacting patients' quality of life and causing mood disturbances. There is no treatment for diabetic neuropathy and disturbingly long history of therapeutic approaches showing promise in preclinical studies in which failing to translate the clinic [1]. Hyperglycemia-induced nerve damage has been considered as a pivotal role in the pathophysiology of DNP. Damaged myelination in afferent nerve fibers which may induce dysfunction in nociceptive transduction, resulting in hyperalgesia and allodynia. Myelin abnormalities have been observed in patients with diabetes and animal models of DNP.

Do the myelin abnormalities represent the severity of diabetes in patients with allodynia and hyperalgesia as major symptoms? I which molecules may regulate the myelin alteration? The findings presented in the research recently published in *Aging and Diseases* support the notion that axonal demyelination plays a key role in the development of DNP and may represent the severity of diabetic painful symptoms manifested as allodynia and hyperalgesia [2]. The myelin damage may be used as markers for diagnosis diabetic neuropathy. The underlying

References

1. Calcutt NA (2020) Diabetic neuropathy and neuropathic pain: A (con) fusion of pathogenic mechanisms?. *Pain* 161:65-86.
2. Deng X, Ma P, Wu M, Liao H, Song XJ (2021) Role of matrix metalloproteinases in myelin abnormalities and mechanical allodynia in rodents with diabetic neuropathy. *Aging Dis* 12:1808.
3. Kawasaki Y, Xu ZZ, Wang X, Park JY, Zhuang ZY, et al. (2008) Distinct roles of matrix metalloproteases in the early-and late-phase development of neuropathic pain. *Nat Med* 14:331-6.
4. Liu WT, Han Y, Liu YP, Song AA, Barnes B, et al. (2010) Spinal matrix metalloproteinase-9 contributes to physical dependence on morphine in mice. *J Neurosci* 30:7613-23.
5. Deng XT, Wu MZ, Xu N, Ma PC, Song XJ (2017) Activation of ephrinB–EphB receptor signalling in rat spinal cord contributes to maintenance of diabetic neuropathic pain. *Eur J Pain* 21:278-88.