Int. j. adv. multidisc. res. stud. 2025; 5(4):483-484

Received: 28-06-2025
Accepted: 08-07-2025

International Journal of Advanced Multidisciplinary Research and Studies

ISSN: 2583-049X

Letter to the Editor

Frequent occurrence of osteoporosis in females with diabetic neuropathy is coincidental

Josef Finsterer
Department of Neurology, Neurology & Neurophysiology Center, Vienna, Austria

DOI: https://doi.org/10.62225/2583049X.2025.5.4.4631
Corresponding Author: **Josef Finsterer**

Letter to the Editor

We were pleased to read the article by Kumar *et al*. on a cross-sectional and observational study on the prevalence of osteoporosis and vertebral fractures in 32 postmenopausal type 2 diabetic women with diabetic polyneuropathy and aged less than 60 years [1]. The prevalence of osteoporosis was 69% in the lumbar spine and 18.7% in the femoral neck [1]. The study is noteworthy, but several points should be discussed.

The first point is that alternative causes of osteoporosis such as low calcium intake, eating disorders, a history of gastrointestinal surgery, age, low sex hormones, white or Asian ethnicity, short stature, medications for dizziness, chemotherapy drugs, kidney or liver disease, multiple myeloma, and sedentary lifestyle were not adequately considered. Before attributing osteoporosis to diabetic neuropathy, all these other possible causes must be thoroughly ruled out.

The second point is that diabetic neuropathy was diagnosed based on clinical presentation and clinical sensory testing. However, large fiber neuropathy should be confirmed by nerve conduction studies (NCS), which are better able to quantify the reduction in nerve conduction velocity or decreased amplitudes of motor or sensory fibers than rating scales or sensory testing. It is also important for the prognosis to know whether the neuropathy is of the axonal or demyelinating type.

The third point is that small fiber neuropathy (SFN) has not been considered as a cause of clinical presentation. SFN may be the first manifestation of neuropathy when the NCS are still normal. In particular, the 30 diabetic patients who served as the control group need to be tested to clarify whether or not they had SFN and are suitable as disease controls. Especially in patients in whom NCSs have ruled out large fiber neuropathy, SFN should be considered as a manifestation of diabetes.

The fourth point is that alternative causes of polyneuropathy have not been adequately ruled out. Autoimmune neuropathy, endocrine neuropathy, paraneoplastic or neoplastic neuropathy, ischemic neuropathy, toxic neuropathy, or critically ill neuropathy have not been ruled out. Patients with diabetes, even if they are between 40 and 60 years old, can be polymorbid, so it is important to know all the comorbidities of each included patient and to assess whether the neuropathy in the included patients was truly monocausal or multicausal.

The fifth point is that the group size was small, which limits the reliability of the results. Whether diabetic neuropathy is indeed associated with an increased prevalence of osteoporosis should be analyzed with a more reliable multicenter design.

The sixth point is that the article by Kim *et al*. [2], which was used to support the claim that diabetic neuropathy affects bone health, is unconvincing. These authors only found an increased prevalence of diabetic neuropathy in patients with bone fractures, but the causality between the two was not investigated [2].

In summary, adequately designed and well-powered studies are needed before a causal relationship between osteoporosis and diabetic neuropathy can be assumed. It is also important that causes other than diabetes are excluded in patients with neuropathy, especially in patients with well-controlled diabetes.

Declarations
Ethical approval: Not applicable.

Consent to participation: Not applicable.

Consent for publication: Not applicable.

Funding: None received.

Availability of data and material: All data are available from the corresponding author.

Completing interests: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Author contribution: JF was responsible for the design and conception, discussed available data with coauthors, wrote the first draft, and gave final approval. xx: contributed to literature search, discussion, correction, and final approval.

Acknowledgements: None.

Keywords: Osteoporosis, Vertebral Fractures, Diabetes, Neuropathy, Nerve Conduction Studies

References
1. Kumar S, Singh SK, Singh S. Prevalence of Osteoporosis in Postmenopausal Type 2 Diabetic Women with Diabetic Peripheral Neuropathy. Indian J Endocrinol Metab, Jan-Feb 2025; 29(1):55-60. Doi: 10.4103/ijem.ijem_108_24
2. Kim JH, Jung MH, Lee JM, Son HS, Cha BY, Chang SA. Diabetic peripheral neuropathy is highly associated with nontraumatic fractures in Korean patients with type 2 diabetes mellitus. Clin Endocrinol (Oxf), Jul 2012; 77(1):51-5. Doi: 10.1111/j.1365-2265.2011.04222.x