

Peripheral neuropathy: a common complication of diabetes in Africa?

Neuropatía periférica: ¿una complicación de la diabetes frecuente en África?

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Dear Editor:

Worldwide, the number of people with diabetes mellitus is increasing exponentially and alarmingly. According to the International Diabetes Federation (IDF),⁽¹⁾ in 2021 there was an estimated 536.6 million people living with diabetes, specifically adults aged 20 to 79 years across 215 different countries and territories. The highest number of deaths is recorded in low- and middle-income countries, where 80.6%

of people with diabetes reside. This disease causes deadly, disabling, and costly complications that shorten life expectancy.

The magnitude of the diabetes mellitus burden in Africa is uncertain, due to insufficient studies, the use of diverse epidemiological analysis methodologies, and the application of standardized diagnostic tests and biomarkers designed for other populations, especially those from developed countries, to African patients.

In Africa, more than 24 million people suffer from diabetes mellitus, and premature death rates from this cause are the highest. Evidence shows a high prevalence of risk factors for the disease, and by 2045 a relatively higher increase in the number of patients is expected in this region compared with others.⁽²⁾

Diabetic peripheral neuropathy is the most common complication of diabetes mellitus and is a cause of disability and poor quality of life. It is defined by the presence of symptoms and signs of peripheral nerve dysfunction in people with diabetes mellitus, after excluding other causes.⁽³⁾ Furthermore, it is a determining factor in the development of foot ulcers and, consequently, lower-limb amputations. These issues have significant economic implications due to increased healthcare expenditures.⁽⁴⁾

The epidemiology of diabetic peripheral neuropathy is variable, with prevalence ranging between 16% and 66%. These figures are influenced by differences in diagnostic criteria, types of diabetes, patient selection methods, and study sample sizes.⁽⁵⁾ In a systematic review and meta-analysis published in 2020,⁽⁴⁾ the combined overall prevalence of this complication in Africa was 46%, much higher than the 35.78% reported for developed countries.

The prevalence rates of diabetic peripheral neuropathy are high in Africa and in developing countries from other regions. This is due to multiple factors: late diagnoses, lack of screening and diagnostic resources, poor blood glucose control, rising healthcare costs and expenditures, inadequate medical facilities, and insufficient services for diabetic patients.⁽⁶⁾

The practical experience of this author as a member of a collaborative mission in a hospital in the Republic of Angola showed that more than half of hospitalized or outpatient individuals exhibited symptoms and signs suggestive of diabetic peripheral neuropathy. Without doubt, the prevalence of this complication among people with diabetes in this setting is very high; in the author's view, this may be due, among other factors, to delayed diagnosis of the disease, poor metabolic control over prolonged periods, a high frequency of hypertension (associated with alcoholism), and genetic predisposition. In

this environment, vitamin deficiency-related malnutrition and infections such as tuberculosis and HIV/AIDS may also exacerbate neuropathic symptoms.

In Africa, given the significant prevalence of this complication, it is essential that healthcare professionals—particularly those without clinical experience in this setting—adopt a multidisciplinary approach and perform routine neurological examinations when evaluating patients with diabetes. This enables the early detection of diabetic peripheral neuropathy and the provision of appropriate treatment. Furthermore, it helps minimize the occurrence of ulcers in high-risk patients, thereby preventing amputations, which ultimately improves the quality of life of this population.

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Conflict of interest

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Authors' contribution

Dagoberto Álvarez-Aldana: conceptualization, investigation, resources, drafting of the original manuscript, writing, review, and editing.

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