Editorial

https://doi.org/10.6065/apem.2322046edi06
Ann Pediatr Endocrinol Metab 2023;28:1-2

Annals of Pediatric Endocrinology & Metabolism
apem

Commentary on "The prevalence of diabetic peripheral neuropathy in youth with diabetes mellitus"

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Diabetic neuropathy (DN) is a chronic, concerning complication in individuals with diabetes mellitus, resulting in substantial morbidity and decreased quality of life. However, limited data are available on the prevalence of DN in pediatric-onset diabetes, particularly in Asian populations. In this study, the authors aimed to determine the prevalence of DN in pediatric-onset diabetes in a tertiary care center and assess the sensitivity and specificity of the monofilament test and noninvasive screening to diagnose DN compared with the gold-standard nerve conduction studies (NCS).[1)]

This study provided valuable insight into the prevalence of DN in youth with diabetes mellitus at a tertiary care center in Thailand and emphasized the importance of early screening and intervention. In total, 65 Thai children and adolescents (39 females) who were diagnosed with diabetes before the age of 15 years were enrolled. All subjects were screened for DN by foot and neurological examination, light touch sensation by monofilaments and the Michigan Neuropathy Screening Instrument (MNSI). NCS were used as the gold standard for diagnosis of DN. Of the 65 subjects, 12.3% had subclinical DN on NCS. All subjects with abnormal NCS were clinically asymptomatic and were thus defined as having subclinical DN. The study found that noninvasive screening tools, including foot and neurological examination, monofilaments, and MNSI, failed to detect DN in all subjects with abnormal NCS, suggesting the poor sensitivity of these noninvasive screening tests in pediatric populations. These findings suggest the need for more accurate and sensitive screening tools and underline the importance of NCS as the gold standard for diagnosis of DN. The mean duration of diabetes was not significantly different between patients with and without DN. Poor glycemic control was found to be a significant risk factor for DN, as evidenced by higher HbA1c levels in patients with DN compared to those without DN. The occurrence of diabetic nephropathy was also associated with DN. Notably, one patient developed DN within three years after diagnosis, emphasizing the importance of early screening and interventions. This study highlights the need for routine screening of DN in pediatric-onset diabetes, particularly in individuals with poor glycemic control.

However, the study has some limitations, including its small sample size and cross-sectional design. The study only included patients from a single center, and the results may not be generalizable to other populations. It should be noted that previous studies indicated that monofilaments and MNSI were effective screening tools for DN. For instance, one study demonstrated that monofilament testing had high sensitivity and specificity for detecting diabetic peripheral neuropathy (DPN).[2)] Additionally, another study found that MNSI had high sensitivity and specificity for detecting DPN.[3)] Furthermore, these tests are cost-effective and can be performed easily and quickly. Overall, the study emphasizes the importance of screening for DN in pediatric-onset diabetes, particularly in those with poor glycemic control and diabetic nephropathy. Nevertheless, this study suggests that noninvasive screening tests may not be reliable for detecting DN in children and adolescents with diabetes. Therefore, further studies are needed to determine the optimal screening methods for DN in this population. Early detection and management of DN may prevent or delay associated complications and improve long-term outcomes in pediatric-onset diabetes.

Conflicts of interest: No potential conflict of interest relevant to this article was reported.

See the article "The prevalence of diabetic peripheral neuropathy in youth with diabetes mellitus" via https://doi.org/10.6065/apem.2244092.046.

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ISSN: 2287-1012(Print)
ISSN: 2287-1292(Online)

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