

[O21] PAINFUL NEUROPATHY IS COMMON BUT LARGELY UNDIAGNOSED IN SUBJECTS WITH AND WITHOUT DIABETES PARTICIPATING IN A NATIONWIDE EDUCATIONAL INITIATIVE (PROTECT STUDY)

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Aim: Painful distal sensory polyneuropathy (DSPN) is associated with considerable morbidity and an increased risk of mortality, but neuropathy screening is underutilized in primary care practice. We conducted a nationwide educational initiative to determine the prevalence and risk factors of diagnosed and previously undiagnosed painful and painless polyneuropathy.

Method: Among 1,589 individuals participating in the initiative, 643 had no diabetes by history (ND) (age [mean±SD]: 67.7±11.8 years, 39% male), 113 had type 1 diabetes (age: 59.4±15.6 years, 47% male), and 833 had type 2 diabetes (age: 69.7±9.7 years, 51% male). DSPN was assessed by history and foot examination including pressure (10 g monofilament), temperature (tip therm instrument), and vibration (tuning fork) perception and was classified as possible, probable, and severe if 1 of 3, 2 of 3, and 3 of 3 tests were abnormal. Painful DSPN was defined as having pain and/or burning at rest in the feet, while painless DSPN was defined as the presence of paraesthesia, numbness, or absence of symptoms. Foot pulses, HbA1c (point-of-care testing), and symptom questionnaires were determined in subsets of participants.

Results/Discussion: DSPN was detected in 49.3 (95% CI: 46.0-52.6)% of ND, 43.5 (35.4-51.9)% in type 1, and 52.9 (50.0-55.9)% in type 2 diabetes subjects. The percentages of subjects with painful DSPN were 66.7 (60.1-72.8)% in ND, 61.5 (43.6-77.4)% in type 1, and 61.8 (56.2-67.2)% in type 2 diabetes subjects. Among participants with painful polyneuropathy, the latter was reported as previously undiagnosed by 75.8 (67.5-82.9)% of ND, 28.5 (16.6-64.5)% of type 1, and 60.2 (52.5-67.4)% of type 2 diabetes participants. These rates were around 20% higher in subjects with painless DSPN. Apart from age, painful DSPN was associated with higher BMI in participants with type 2 diabetes ($r=0.242$; $P=0.001$). Among ND participants, 30.1 (26.0-34.5)% had HbA1c values of 5.7-6.4%, while 4.1 (2.5-6.4)% showed HbA1c levels $\geq 6.5\%$. Painful DSPN was associated with HbA1c in type 2 diabetes subjects ($r=0.121$; $P=0.040$) and in ND individuals who had HbA1c levels $\geq 6.5\%$ ($r=0.837$; $P<0.001$).

Conclusion: Almost half of subjects with and without diabetes participating in an educational initiative had DSPN which was painful but previously undiagnosed in almost two thirds in all three groups. Since the risk of diabetes was increased in one third of participants without known diabetes, effective strategies to reveal undetected diabetes as well as neuropathy should be implemented.