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# P-045 - FIRST VALIDATION OF A NEW INSTRUMENT APPLIED IN PODIATRIC HOSPITAL, TO QUANTIFY ALTERATIONS OF SENSORY FIBERS OF THE FOOT IN DIABETIC PATIENTS

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## Resumen

**Introduction:** The main clinical manifestations of diabetic peripheral neuropathy (DPN) are sensory dysfunction and foot ulcers associated with a higher rate of morbidity, mortality. Due to these reasons, it is important to prevent diabetic foot ulcer in primary medical care and podiatric care, with a summarized medical history, clinical examination and by means of the Quantitative Sensory Test (QST). QST enables the early detection and quantification of sensory dysfunction of the subtypes of medium and small nerves fibres allowing us to stop the loss of the sensory protection as well us to control the evolution of the DPN in diabetic patients.

**Objectives:** To demonstrate the capacity of the portable Quantitative Sensory Testing device (QST) NerveCheck Master Beta Product, to detect clinical and subclinical neuropathic dysfunctions in type 2 diabetic patients (DM 2) on a daily podiatric care.

**Methods:** Patients: 28 male and female, aged 69.07 ± 7.7 SD (50-75), > 10 years DM2, excluded other causes of neuropathies. We compared NerveCheck vs standardized clinical tools in podiatry. Study participants underwent evaluation of NerveCheck Master Beta, Vibration perception threshold 248 Hz (VPT), warm (WPT), cold (CPT) and Heat pain Thresholds (HPT),Vs (PPT) Pin prick Threshold, (VPT) were assessed by Tunning fork 128 Hz, plastic friction bar (CPT), metal bar (WPT) and monofilament 10 g. Podiatry Neuropathy disability score (PoNDS) 2 = all test normal (N), 1 = one abnormal (R), 0 = 2 or > abnormal (Ab). One way ANOVA, Pearson correlation (Pc). Participants were recruited from the podiatric faculty of Bellvitge Hospital, Barcelona, Spain.

**Results:** Pearson correlation 0.438 VPT, -0.084 WPT, 0.008 HPT, 0.122 CPT, 0.415 Neuro DM, 0.296 Neuro DM. No Pain p-value 0.020, 0.669, 0.970, 0.53, 0.028 (correlat).

**Conclusions:** Tools for clinical use in podiatry to detect dysfunctions, specially in small sensory fiber subtypes, have a lower detection capacity than those explored with the QST NerveCheck in diabetic patients. There has been a greater detection of dysfunction in the HPT in comparison NerveCheck frente a the Pin Prick Thresholds of the PoNDS, resulting in a low correlation between both methods.