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Fluctuating sensorimotor responses in routine foot screening assessments results from the West of Ireland Diabetes Foot Study Garrow AP[1], Hurley L[2], Kelly L[2], Glynn LG[3], McIntosh C[4], Dinneen SF[2,5]. [1]School of Health Care Professions, University of Salford, [2] Diabetes Centre, Galway University Hospitals & Galway PCCC, HSE West; [3]Department of General Practice, NUI Galway; [4]Discipline of Podiatry, NUI Galway; [5]Department of Medicine, NUI Galway

Testing for sensorimotor abnormalities is an established part of diabetic foot screening. This analysis examined the variability of common screening tests over time. 563 primary care patients attended a standardised foot ulcer risk assessment including light touch (10g monofilament); sharp/blunt; temperature; vibration perception (VPT) and ankle reflex response. 377/563 (67%) patients attended a follow-up assessment 19(sd 2.1) months after the baseline visit. All assessments were carried out by health care professionals trained in sensorimotor screening. The analysis examined changes in response in each of the clinical tests between baseline and follow-up. Kappa (k) statistics show the level of agreement between the two time points over and above what would be expected by chance. K values <0.2 indicate Poor; 0.2-0.4 Fair & 0.4-0.6 Moderate agreement The **proportion** of patients with 'normal' sensation at baseline and also at 19 months was sharp/blunt 87.3%; monofilament 82.3%; VPT 80.3%; temperature 72.5%; and ankle reflex 69.8%. In contrast, a large proportion of patients with sensorimotor dysfunction at baseline were recorded as having "normal" sensation at follow-up: sharp/blunt 43.9%; monofilament 41.8%; VPT 43.9%; temperature 36.9%; and ankle reflex 49.6%. The large variability was reflected in the Kappa values which suggested only moderate levels of agreement between the baseline and follow-up assessments. (sharp/blunt 0.42; monofilament 0.50; VPT 0.43; temperature 0.36 & ankle reflex 0.28). Whilst instrument measurement error and inter-observer variability may partly explain differences between baseline and follow-up measures, the observed improvements in sensorimotor function were unexpected and perhaps counter-intuitive. The **results** may reflect fluctuations in peripheral nerve function in patients with partial rather than complete sensory loss. The **results** suggest that clinicians should be cautious when interpreting the results of individual clinical tests of neurological dysfunction in patients with diabetes.