

## P17

### Vascular, sensory and renal function in patients attending community-based foot screening: results from the West of Ireland Diabetes Foot Study

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This study aimed to describe the prevalence of risk factors for diabetic foot ulceration in Irish General Practice. **Methods:** All patients with diabetes attending 12 general practices were invited for screening. Examination comprised 10g monofilament cutaneous pressure perception (CPP), vibration perception threshold (VPT), a composite modified neuropathy disability score (mNDS), palpation of pedal pulses (PP) and doppler waveform assessment. The most recent creatinine result was used to calculate eGFR and hence chronic kidney disease (CKD) stages. **Results:** 563 (68%) patients attended screening. Mean age was 64 years (SD13), 60% were male, 90% had type 2 diabetes and mean duration of diabetes was 7.7 years. Mean HbA1c was 7.3% (SD1.4), serum creatinine 89.6 $\mu$ mol/l (SD31.5) and eGFR 78.4ml/min/1.73m<sup>2</sup> (SD24.4). On examination 25% had impaired CPP, 23% impaired VPT, 24% had mNDS>6, 18% had  $\geq$ 2 PP absent and 39.6% had abnormal doppler waveform defined as a mono- or bi-phasic pulse. Those with abnormal CPP, VPT and mNDS had a significantly lower mean eGFR than those with normal sensory function: 74.1 vs 79.9ml/min/1.73m<sup>2</sup> for CPP (p=0.02), 68.4 vs 80.2ml/min/1.73m<sup>2</sup> for VPT (p<0.001) and 72.2 vs 80.5ml/min/1.73m<sup>2</sup> for mNDS (p<0.001). Renal function was also poorer in patients with abnormal PP palpation or doppler waveform compared to those with normal vascular function: eGFR 70.2 vs 80.2ml/min/1.73m<sup>2</sup> (p<0.001) and 71.6 vs 82.9ml/min/1.73m<sup>2</sup> (p<0.001) respectively. Stage 3 and 4 CKD was prevalent in 19.3% and 2% of patients. There was a stepwise increase in the prevalence of all sensory and vascular risk factors with advancing CKD. **Conclusion:** Our data show the extent of sensory dysfunction and vascular impairment in a representative sample of diabetic patients in general practice and supports existing data showing a relationship between these risk factors and CKD. The use of eGFR may facilitate the identification of at-risk patients earlier in the disease process.