

**Methods:** Retrospective observational study of DFI treated with OPAT between July 2016 and August 2017. Data collected included baseline characteristics, clinical diagnosis, antibiotics used, duration of antibiotic treatment, treatment outcome, surgical intervention, microbiological spectrum and complications.

**Results:** There were 59 episodes of DFI in 51 patients [median (interquartile range), age 66 (54 to 77) years]; 40/51 (78%) were male. The commonest indication for OPAT was osteomyelitis (88%). Teicoplanin (51%) and ceftriaxone (29%) were the commonest antibiotics used. *Staphylococcus aureus* was the most frequent organism (31%) identified. Of 59 episodes of OPAT, 16 (27%) were initiated in the outpatient clinic, avoiding hospital admission. These patients were treated with OPAT for 16.5 (11 to 28) days. Of 59 episodes, 43 (73%) episodes of OPAT were initiated during inpatient stay. Inpatient length of stay (LOS) was reduced by 21 (14 to 42) days. Of 51 patients, 19 (37%) were managed medically; 24/51 (47%) patients underwent surgical intervention [surgical debridement in 4/51 (8%) and minor amputation 20/51 (39%)]; 8/24 (33%) patients received OPAT post-operatively. OPAT treatment resulted in saving 1,484 bed days, with cost savings of £595,600. OPAT was well tolerated; one patient had an adverse reaction to teicoplanin (thrombocytopenic purpura).

**Conclusion:** OPAT in DFI is safe and associated with good outcomes. OPAT reduces length of stay and hospital admission and is cost-effective.

### P331

#### Impact of peripheral vascular disease on amputation rates

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**Background:** Vascular assessment is paramount as patients with diabetes are at an increased risk of peripheral vascular disease (PVD).

**Aims:** To determine the association of patients referred to the vascular department and amputation rates.

**Methods:** Retrospective analysis of patients attending a multidisciplinary footcare clinic from 2016 to 2017. Demographic data, HbA1c levels, SINBAD scores, presence of osteomyelitis, vascular referral and amputation rates were recorded. Logistic regression analysis was applied to determine whether these factors were associated with increased amputation rates. Chi-square was used to determine the association between vascular referral and amputation.

**Results:** Ninety-six patients were analysed; 33/96 patients were referred for a vascular assessment and 15/33 (45.5%) had an amputation. Of the 63/96 who were not referred to the vascular team, 24/63 (38.1%) had an amputation. Pearson chi-square  $\chi^2$  (1) = 7.12,  $p = 0.008$ , suggested an association between individuals referred to the vascular team and having an amputation. Logistic regression showed that male gender was the only statistically significant factor associated with amputations, in both those that had a vascular referral ( $p = 0.028$ ) and those with no referral ( $p = 0.047$ ). The presence of osteomyelitis was more likely to lead to amputations in the referred group OR = 4.5,  $p = 0.27$  compared to the group with no referral OR = 1.6,  $p = 0.31$ .

**Conclusion:** Our results show that male patients that were referred to the vascular team and therefore had PVD were more likely to undergo an amputation. There needs to be prompt, early

referral, especially of men to the vascular team to prevent amputations.

### P332

#### Orthopaedic interventions for diabetic neuropathic foot ulceration

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**Background:** Peripheral neuropathy affecting the motor nerves causes changes in the foot anatomy resulting in considerable pressure over the plantar metatarsophalangeal (MTP) joints. Sensory neuropathy is known to cause micro-trauma and breakdown of overlying tissue which eventually leads to plantar ulceration. At the Royal Bournemouth Hospital multidisciplinary diabetes foot clinic, we have a significant number of patients with chronic neuropathic foot ulceration. Their wounds have not healed despite regular debridement, off-loading footwear and interventions to improve glycaemic control and encourage weight loss. They additionally require multiple courses of antibiotics resulting in significant morbidity for patients.

**Methods:** We selected seven patients from the foot clinic with chronic neuropathic plantar ulceration, and referred for day-case orthopaedic surgical interventions including flexor tendonotomies and Achilles tendon lengthening.

**Results:** We have achieved good healing for five of seven patients who were then discharged from the foot clinic after a three-month period (mean and median). They had been attending the diabetes foot clinic for a median of five years (mean 5.9, range 1 to 13 years). The other two patients have shown considerable improvement and are expected to be discharged imminently. None of the patients had any complications from their surgery.

**Summary:** Specialist orthopaedic intervention is low risk and allows healing of chronic neuropathic plantar foot ulceration in selected patients. We have identified other patients for similar surgery and, in addition to a greatly improved outcome for patients, we anticipate improvement in access to the diabetic foot clinic allowing us to see new patients in a timely way in accordance with NICE guidelines.

### P333

#### Glycaemic control of people referred to a multidisciplinary diabetic foot clinic at a large teaching hospital

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**Aims:** Poor glycaemic control is a risk factor towards diabetic foot complications. Our study assessed the glycaemic index of people living with diabetes referred to a multidisciplinary diabetic foot clinic at a large teaching hospital in the United Kingdom.

**Methods:** The clinical records of people attending the diabetic foot clinic were studied retrospectively. Data were collected on age, ethnicity, type of diabetes, recent HbA1c, antidiabetic medications and previous diabetic foot risk factors (peripheral neuropathy [PN], peripheral vascular disease [PVD] and/or amputation).

**Results:** Fifty-six new referrals to the diabetic foot clinic over a five-month period were identified (Type 2 diabetes, 82%; mean age, 66 years; females, 20%; white ethnicity, 82%). HbA1c values were not available for 23.2% people. The remaining 43 people (76.8%) had a mean HbA1c of 73 mmol/mol (range 30 to 119). Good glycaemic control was defined as an HbA1c of 53 (7%) in-line with the Type 2 diabetes NICE guidelines (NG28) for people on  $\geq 2$  antidiabetic medications. Seventy-four per cent of the cohort had poor glycaemic control. Twenty-eight per cent people were identified with PN, 33% had PVD and 23% had at least one amputation. Two per cent had both PN and an amputation, 14% of the people had PVD and an amputation and no one had all three pre-existing risk factors (PN, PVD and amputation).

**Conclusions:** A large number of people referred to the multidisciplinary diabetic foot clinic are demonstrating poorly controlled diabetes. Diabetes UK should direct more efforts towards educating healthcare professionals to optimise glycaemic control in people who live with diabetes and are at risk of diabetic foot complications.

### P334

#### **A retrospective analysis of outcomes, antibiotic use, and usefulness of CRP in diabetic foot wounds that appear to be clinically uninfected at initial assessment**

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**Aim:** To analyse outcomes of diabetic foot patients with no overt clinical signs of infection on initial assessment and assess usefulness of initial markers in antibiotic decision making and management.

**Method:** Retrospective analysis of consecutive new patients with clinically uninfected foot wounds on their first visit to the Diabetic Foot Clinic between May and October 2016. We excluded patients with clinical signs of infection or necrosis, new patients who attended clinic after discharge from the ward, and those who had no follow-up review. We analysed antibiotic use, CRP data and six-week foot outcomes for these patients.

**Results:** A total of 39 patients were sampled. Mean age 66 years, 69% males, 31% females. Forty-nine per cent were given antibiotics at first visit, and of these, 19% had healed, 29% were static and 38% were improving at or before six weeks, but 14% had deteriorated at six weeks. Of the 51% of patients not given antibiotics at first visit, 22% had healed, 6% were static, and 33% were improving at six weeks. However, 39% had deteriorated and required antibiotics at or prior to six weeks. CRP was assessed at baseline visit. Average initial CRP for patients whose wounds deteriorated was 15.3mg/l, vs 7.23mg/l for those who healed/improved [ $p = 0.031$ ]. Average initial CRP for patients who fully healed was 2.56mg/l vs 27.7mg/l for patients who deteriorated despite antibiotics [ $p < 0.001$ ].

**Conclusion:** Our data indicate that even in diabetic foot wounds which do not appear to be clinically infected, CRP may be a useful marker of future deterioration.

### P335

#### **A comparison of route of admission on hospital length of stay for patients with emergency diabetes foot complications**

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**Background:** Patients admitted to hospital with emergency diabetes foot complications can have a long hospital length of stay (LOS). The unique role of the inpatient diabetes foot practitioner (DFP) has been implemented to coordinate care for patients admitted with acute diabetes foot complications. The practitioner acts as link person within the multidisciplinary team coordinating care and safely delivering high-quality, effective, holistic therapy while reducing LOS.

**Aim:** To compare LOS of patients admitted from Accident and Emergency (A&E) with LOS of patients admitted from the diabetes foot clinic (DFC).

**Method:** Retrospective review of patients admitted over four months (April–June 2016) with emergency diabetes foot complications and referred to the DFP. Patient demographics, LOS, biochemical parameters: C-reactive protein (CRP), white cell count (WCC) and estimated glomerular filtration rate (eGFR) were compared.

**Results:** Fifty-three patients and a total of 59 admission episodes were included. There were 79% males, 81% Type 2 diabetes, 56% admitted via the DFC and 44% via A&E. The patients admitted via A&E had a longer LOS,  $35 \pm 33$  days (median 20 days) vs  $21 \pm 18$  days (median 15 days) in those admitted via DFC [ $p = 0.042$ ]. The CRP was significantly higher in the A&E cohort  $147 \pm 105$ mg/l (median 116mg/l) vs  $73 \pm 68$ mg/l (median 57mg/l) in the DFC cohort [ $p = 0.002$ ]. The WCC was significantly higher in the A&E cohort,  $12 \pm 4 \cdot 10^{12}/l$  vs  $9 \pm 4 \cdot 10^{12}/l$  [ $p = 0.006$ ]. The eGFR was significantly lower in those admitted via A&E,  $48 \pm 30$ mg (median 42mL/min) vs  $64 \pm 27$ mL/min (median 69mL/min) [ $p = 0.036$ ].

**Conclusion:** Patients with diabetes foot complications require universal, rapid, open access to diabetes foot clinics. This approach should reduce the presentation of patients with advanced pathologies to A&E departments.

### P336

#### **Mortality trends in patients with diabetic foot ulceration**

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**Introduction:** Long-term mortality in individuals with diabetic foot ulceration has historically been regarded as unfavourable. There has been a major focus in recent years in improving the care of patients with foot ulceration, but the impact of these initiatives remains unclear.

**Aims:** To assess long-term (four years) mortality in a contemporary diabetes foot clinic population.

**Methods:** Patients ( $n = 300$ ) were recruited at their first diabetic foot clinic appointment with a new ulcer (between 2013 and 2016). Patients were followed up prospectively for up to four years to assess mortality rates. Possible factors that may have influenced mortality were also explored.