

## Lower limb complications

### How can we improve footcare services?



Matthew Young,  
Consultant  
Physician,  
Edinburgh  
Royal Infirmary

The results of the ABCD survey of specialist diabetes care services reveal that the provision of diabetic footcare remains patchy. Less than two-thirds of services are happy with their access to casting for ulcers, and most have orthotic problems.

- How can this be improved? The NSF and Clinical Standards Board for Scotland are promoting footcare as part of diabetes care. It is important that diabetic footcare specialist podiatry services are developed and that rotating community podiatrists are no longer the sole providers of specialist services. Indeed, multidisciplinary clinics are the best model for ulcer care. Leadership, usually from a diabetologist, seems to be the main factor in developing services, although less than 10% of funding bids in the past decade have been for foot services. As revalidation, appraisal and continuing professional development become more

widely used within the NHS, standards will be set for foot services. The target of a minimum number of ulcers to be seen per year is likely to be one of these.

- Is there a case for regional referral centres for most foot ulcers, with feeder services in community clinics and smaller hospitals? The discussion at this year's diabetic foot conference in London seemed to think so, and next year's foot conferences are likely to take this debate further.

- What treatment can we use? Among this quarter's papers, there are two dressing studies that are under-powered, both having inconclusive results. Both Veves et al and Lalau et al show that the trial treatment healed more ulcers than the control treatment. However, owing to the compounding factors of pressure relief and debridement having a large effect, and the relatively marginal effects of dressing therapies, neither trial demonstrated a statistically significant effect. And so, once again, there is no clear guidance for the clinician. Larger and better studies are essential.

### DIABETIC MEDICINE



### Access to podiatry services is poor

Readability	✓✓✓✓✓
Applicability to practice	✓✓✓✓✓
WOW! factor	✓✓✓✓✓

**1** A postal survey examined the provision of, and variations in, podiatry and other services for diabetic foot care in the UK.

**2** A state-registered podiatrist was attached to 97% of the services, providing three (median) sessions each week for diabetes care. Only 44% had availability at all diabetic clinics, and only 3% had availability at paediatric diabetic services.

**3** All individuals with feet at high risk of ulceration had access to review at least every 2 months in 15% of trusts, and with active foot ulceration at least weekly in 43%.

**4** Over 70% used at least one form of equipment to assess peripheral neuropathy, but peripheral blood flow was only formally measured in 13%.

**5** Orthotic input was highly variable, and absent in 15% of responses.

**6** There were clear regional differences in diabetes footcare services.

**7** The level of access and the nature of the services provided need to be improved, requiring attention from both providers and purchasers of diabetes services.

### DIABETES RESEARCH AND CLINICAL PRACTICE

### Preventive footcare programme

Readability	✓✓✓
Applicability to practice	✓✓✓✓✓
WOW! factor	✓✓✓✓✓

**1** This study aimed to assess the efficacy of a preventive footcare programme, applied in a normal outpatient setting, in decreasing the incidence of foot ulcers in people with diabetes diagnosed as having neuropathy.

**2** A total of 308 diabetic patients with neuropathy, and without a history of foot lesions, were recruited and followed-up for 3–6 years.

**3** Continual footcare education and treatment were available, and patients were evaluated at least every 6 months.

**4** The low-risk group developed 9 ulcers, and the high-risk group 24. Of these, 8 and 19, respectively, were in patients who did not comply with the programme.

**5** Diabetic people who complied with the footcare programme had between an 8- and 22-fold lower risk of foot ulceration compared with people who did not follow the programme.

**6** In summary, if a footcare programme is present, 70% of patients with neuropathy might be expected to change inappropriate footcare behaviour.

Calle-Pascual AL, Duran A, Benedi A, Calvo M et al (2002) A preventative foot care programme for people with diabetes with different stages of neuropathy. *Diabetes Research and Clinical Practice* 57: 111–17

Winocour PH, Morgan J, Ainsworth A, Williams DRR (2002) Association of British Clinical Diabetologists (ABCD): survey of specialist diabetes care services in the UK, 2000. 3. Podiatry services and related foot care issues. *Diabetic Medicine* 19(Suppl. 4): 32–8

**‘Composite sequential reconstruction is an acceptable option in patients presenting for limb salvage reconstruction who have limited venous conduit.’**



## Limb salvage

Readability	✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓

**1** The use of prosthetic bypass followed by venous reconstruction was analysed in patients presenting for limb salvage, with no all-autogenous option.

**2** Of the patients with an inadequate vein for continuous bypass, 27 had an isolated popliteal segment and 106 did not. The latter underwent prosthetic bypass with distal vein cuff or arteriovenous fistula.

**3** Morbidity included bleeding (4%), wound infection (4%) and limb loss (4%). One patient (4%) died.

**4** Six late failures were identified, one of which resulted in amputation.

**5** Primary patency and limb salvage were 80% and 88% at 1 year, respectively.

**6** Treatment involving prosthetic with vein cuff had a 1-year primary patency of 52% and limb salvage of 92%; corresponding figures for treatment involving prosthetic with an arteriovenous fistula were 73% and 84%, respectively.

**7** Composite sequential reconstruction is an acceptable option in patients presenting for limb salvage reconstruction who have limited venous conduit.

Roddy SP, Darling III RC, Ozsvath KJ, Kreienberg PB et al (2002) Composite sequential arterial reconstruction for limb salvage. *Journal of Vascular Surgery* 36: 325–9



## Calcium alginate vs Vaseline gauze

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓

**1** This study aimed to compare the efficacy and tolerance of an alginate wound dressing with a Vaseline gauze dressing in the treatment of diabetic foot lesions.

**2** Primary outcomes were the proportions of patients with granulation tissue over 75% of the wound area and having a 40% decrease in wound surface area.

**3** There was no significant difference in primary outcome, although the calcium alginate dressing appeared more successful.

**4** Pain on dressing change was lower with calcium alginate, and there tended to be fewer dressing changes.

**5** Calcium alginate therefore appears to be more appropriate than Vaseline gauze for topical treatment of diabetic foot lesions, in terms of both healing and tolerance.

Lalau JD, Bresson R, Charpentier P, Coliche V et al (2002) Efficacy and tolerance of calcium alginate versus Vaseline gauze dressings in the treatment of diabetic foot lesions. *Diabetes Metabolism* 28: 223–9

**‘Calcium alginate appears to be more appropriate than Vaseline gauze for topical treatment of diabetic foot lesions.’**



## Promogran vs moistened gauze

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓

**1** This study set out to determine whether Promogran, a wound dressing comprising collagen and oxidised regenerated cellulose, is more effective than standard care (saline-moistened gauze) in treating chronic diabetic plantar ulcers.

**2** A total of 276 patients were randomised to receive either Promogran or moistened gauze, along with a secondary dressing.

**3** Dressings were changed when clinically required, and patients were followed-up for ≤12 weeks.

**4** Wound closure efficiency and safety profile were similar for Promogran and moistened gauze.

**5** Promogran was associated with a higher level of user satisfaction.

Veves A, Sheehan P, Pham HT (2002) A randomized, controlled trial of Promogran (a collagen/oxidized regenerated cellulose dressing) vs standard treatment in the management of diabetic foot ulcers. *Archives of Surgery* 137: 822–7



## Walking strategy in people with diabetic neuropathy

Readability	✓✓
Applicability to practice	✓✓
WOW! factor	✓✓

**1** Diabetic neuropathic patients show a peculiar loading pattern of the foot, possibly shifting from an ankle to a hip strategy.

**2** This study aimed to quantify the differences between diabetic patients and healthy volunteers, with respect to spatial and temporal evolutions of the foot loading curve.

**3** Subjects included healthy volunteers (C), and diabetic people without neuropathy (D), with neuropathy (DN) and with previous neuropathic ulcer (DPU).

**4** Loading time was longer in neuropathic patients than in control subjects. Centre of pressure (COP) excursion along the medio-lateral axis of the foot decreased from C to DPU groups. COP integrals were significantly reduced for all pathological classes.

**5** The changes in COP excursions, and in loading times and patterns, support the hypothesis that there is a change in walking strategy of diabetic patients with peripheral neuropathy.

Giacomozzi C, Caselli A, Macellari V, Giurato L, et al (2002) Walking strategy in diabetic patients with peripheral neuropathy. *Diabetes Care* 25: 8, 1451–7