

It's high time for a global consensus on the diabetic foot



Stuart Baird

Professor of Podiatric Medicine, School of Health and Life Sciences, Glasgow Caledonian University, Glasgow

One of the most quoted international declarations regarding diabetes was signed in St Vincent, Italy, in October 1989. Representatives from most European countries met under the auspices of the World Health Organization (WHO) with experts in the field of diabetes and the International Diabetes Federation (IDF). The St Vincent Declaration set a number of challenging 5-year targets for European countries to adopt, which included: “[Reducing] by one half the number of limb amputations for diabetic gangrene.” Almost 25 years later, we must take stock and ask how successful the international community has been in achieving this ambitious target.

The IDF (2011) reported that approximately 366 million people around the globe had diabetes. The number of people presenting with type 2 diabetes is increasing and it is predicted that by the year 2030, the global figures will have increased to approximately 552 million. Indeed, figures also highlight that in some Middle Eastern countries the prevalence of the disease is already more than 20% of the population between the ages of 20 and 79 (IDF, 2011). In addition, 80% of people presenting with the disease live in developing countries (IDF, 2011).

The major complications of diabetes in the foot are well documented and include neuropathy, foot ulceration, Charcot foot, and peripheral arterial disease. Many of these complications are evident at the point of diagnosis. The lifetime risk of developing a foot ulcer may be as high as 25% (International Working Group on the Diabetic Foot [IWGDF], 2003; Lavery et al, 2003).

In the UK – which has a disease prevalence of 5.6% (IDF, 2011) – there are a number of guidelines and protocols in place to guide the clinician in managing the disease process, using the most up-to-date evidence available. The SIGN (2011) and NICE (2011) guidelines help to inform and direct the well-established foot protection and multidisciplinary teams in primary and acute care.

Throughout 2012, Diabetes UK has made the diabetic foot its focus, raising public awareness of

diabetic foot disease in the UK. Unfortunately, even with well-developed teams and publicity in place, minor and major amputations still feature on the theatre logs of hospitals throughout the UK.

And what about the rest of the world, where guidelines and protocols may not exist and where there is a lack of awareness, on behalf of both patients and clinicians delivering their care?

Dangers of a lack of education

While undertaking a ward round in the Middle East, I was asked to see a patient who had type 2 diabetes. He had been driving his car along the highway in the height of summer when he suffered a puncture. He was wearing traditional Arab dress and a pair of sandals and while bending down to slacken the wheel nuts, kept catching his long cloak on the heel of his sandal. Naturally, he removed his shoe and continued the process of changing the wheel. His diabetes was being managed by the local family physician who had never examined his feet.

Neither the doctor nor the patient was aware of the neuropathy and in the hot summer the temperature of the tarmac beneath his bare feet was over 50°C. The patient suffered horrific burns to the entire weight-bearing aspect of his feet and eventually lost both limbs, his job, and was unable to support his family, all because no-one had told the patient never to walk barefoot.

Stories of this nature are repeated around the globe and it is evident that the standards of care relating to the diabetic foot differ considerably from country to country. Some have a well-developed approach to the management of the diabetic foot while others fall woefully short in providing even the most elementary level of care. There is little evidence of structure or coordination in the management of foot disease, including basic standards of foot health education.

In some countries where there is poor access to a fundamental level of foot care it is the norm for patients to sell their family jewellery, for instance, in order to fund private care. Frequently, by the time the patient seeks help, their foot disease and

ulceration has progressed to an advanced level and the only treatment option available is amputation.

The socioeconomic impact enforced upon patients and their families in many developing countries cannot be overestimated and as the disease prevalence multiplies, this burden will only increase.

In many countries there is no accurate data on the prevalence of long-term diabetic complications, including amputation. It is, therefore, particularly difficult to determine the success of the St Vincent Declaration, 25 year on. However, it is incumbent upon governments and ministries of health across the world to ensure basic foot health education is provided to those at risk of developing diabetic foot complications, thereby minimising the socioeconomic costs of the disease. Many countries have organised national workshops and developed guidelines for the general management of diabetes, however, there has been little provision made to raise clinicians' awareness of the outcomes of diabetic foot disease and the consequences of poor or inappropriate management of the condition.

The WHO stated in 2002 that: "All patients with diabetes are entitled to the same level of care regardless of the country in which they live." If only this were true! ■

Apelqvist J, Larsson J (2000) What is the most effective way to reduce incidence of amputation in the diabetic foot? *Diabetes Metab Res Rev* **16**(Suppl 1): S75–83

International Diabetes Federation (2011) *Diabetes Atlas: The Global Burden (5th edn)*. Available at: <http://bit.ly/zrlkkn> (accessed 17.07.2013)

International Working Group on the Diabetic Foot (2003) Epidemiology of diabetic foot infections in a population-based cohort. Paper presented at: International Consensus on the Diabetic Foot, Noordwijkerhout, the Netherlands: 22–24 May

Lavery LA, Armstrong DG, Wunderlich RP et al (2003) Diabetic foot syndrome: evaluating the prevalence and incidence of foot pathology in Mexican Americans and non-hispanic whites from a diabetes disease management cohort. *Diabetes Care* **26**: 1435–8

NICE (2012) *Diabetic foot problems – inpatient management of people with diabetic foot ulcers and infections (CG119)*. Available at: <http://bit.ly/OYHBQs> (accessed 17.07.2013)

SIGN (2010) *Management of Diabetes (116)*. Available at: <http://bit.ly/9Pes37> (accessed 17.07.2013)

World Health Organization (2002) *Diabetes: The Cost of Diabetes. Fact Sheet No. 236*. Available at: <http://bit.ly/172J55p> (accessed 17.07.2013)

“Some countries have a well-developed approach to the management of the diabetic foot while others fall woefully short in providing even the most elementary level of care.”