Diabetic foot problems: a global challenge but eminently preventable

The late complications of diabetes are often silent until well advanced. Indeed, Type 2 diabetes may present with a neuropathic foot ulcer. The efficacy of screening and prevention has been confirmed in the UK in diabetic retinopathy: it is now essential to repeat this success in lower limb complications of diabetes, says Andrew Boulton, Professor of Medicine, University of Manchester.

As more than 80 per cent of all amputations are preceded by foot ulcers, it is screening for those at risk of developing ulcers that is essential. Risk factors for foot ulcers are well known and have been confirmed in multiple prospective studies. Most important is to identify those patients with insensitive feet as a consequence of neuropathy. As up to 50 per cent of older people with Type 2 diabetes have risk factors for foot ulcers, such screening is essential. It was Dr Paul Brand, a missionary and surgeon working with leprosy and, later, diabetes patients in South India in the 1950s, who described those with neuropathy as having lost the 'gift of pain'.

Foot screening is simple. Brand said that you do not need expensive equipment to diagnose an at-risk foot. Thus, the annual foot review for diabetic patients can be performed with ease and minimal

BIOGRAPHY

ANDREW BOULTON
Professor Boulton is a graduate of Newcastle upon Tyne and subsequently trained in Sheffield and Miami, prior to accepting an appointment at Manchester University. He has authored more than 500 peer-reviewed manuscripts and book chapters, mainly on diabetic lower limb and renal complications. Among his many awards, he has received the American Diabetes Association’s (ADA) Roger Pecoraro Lectureship, the European Association for the Study of Diabetes (EASD) Camillo Golgi Prize and was the first recipient of the international award on diabetic foot research. He was the 2008 winner of the ADA’s Harold Rifkin Award for distinguished international service in diabetes. Prof Boulton has

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expense. Most important is the careful visual inspection of both feet with shoes and socks removed. The peripheral pulses should be palpated, and simple tools can be used to assess sensation.

It was Gerry Rayman’s group in Ipswich that described and validated the simplest test of all – the Ipswich Touch Test\(^4\). If the patients cannot feel the touch by the examiner’s finger on their toes, then they are at risk due to lack of sensation. This test requires no equipment at all!

Recent NICE guidance recommends that those patients found to have any risk factors for foot ulceration (eg neuropathy, peripheral vascular disease, foot deformity, past history of ulcer and so on) require education in foot self-care, regular podiatry and more frequent follow-up. Whereas no-one has proven that education alone reduces foot ulcer incidence, the Ipswich group\(^5\), and others, have confirmed that a multidisciplinary approach to footcare, which includes patient education, does lead to reductions in amputations among people with diabetes.

In this issue, the Q&A looks at how one podiatry team has used root cause analysis to improve footcare. This is followed by what lessons might be learned from the National Diabetes Foot Care Audit by William Jeffcoate. It is clear, again, that late presentation (perhaps because of the loss of the ‘gift of pain’) leads to significantly poorer outcomes. As foot problems can be identified and prevented in hospital inpatients, the final footcare article, by Nikki Joule, is particularly apt. NICE guidance now recommends that everyone with diabetes should have their feet checked on admission to hospital. Finally, the blog post by Scott Cawley, from the front line, reminds us of the importance of education in preventing foot problems in people with diabetes.

All these articles emphasise the need for early screening and prevention of problems, which has to be the way forward in reducing foot ulcers and amputations in diabetes.

REFERENCES
\(^3\) Boulton AJM (2012). Diabetic foot: what can be learned from leprosy? Legacy of Dr Paul W Brand. *Diabetes/Metabolism Research and Reviews* 28 (suppl 1): 3–7

The annual foot review for diabetic patients can be performed with ease and minimal expense.\(^1\)

Putting feet first

Putting Feet First is Diabetes UK’s campaign to put a stop to unnecessary amputations. The charity wants people with diabetes to know how to look after feet and then know what to expect from their health service. It wants local services to provide an integrated footcare pathway – the right treatment, in the right place, at the right time.

**Six steps to better foot care!**

1. **Ensure that the full diabetes footcare pathway is being commissioned.**

2. **Use guidance and data to inform local footcare commissioning and performance.**

3. **Ensure all inpatients with diabetes receive foot checks and appropriate care.**

4. **Conduct a root cause analysis for all major amputations.**

5. **Ensure local participation in the National Diabetes Foot Care Audit.**

6. **Network and share learning with others.**

www.diabetes.org.uk/shared-practice-footcare