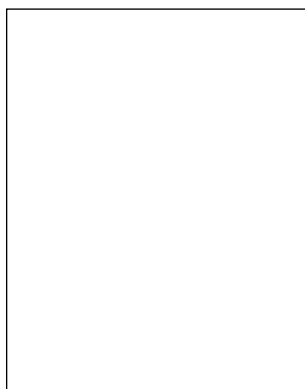


The diabetic foot: a global view



Andrew Boulton

Following Peter Cavanagh's excellent 'Letter from America' in the last issue of 1998 (Cavanagh, 1998), I would like to present a 'global view' of diabetic foot problems.

It is important to remember, taking an historical perspective, that much of what we have learned in the management of the diabetic neuropathic foot did not emanate from Europe or the USA — but from Asia. It was Dr Milroy Paul, a surgeon working with leprosy patients in Ceylon (now Sri Lanka), who described the successful use of plaster casts in foot ulcers over 60 years ago, before the discovery of antibiotics (Boulton and Vileikyte, 1999). Later, other pioneers in the care of the foot in leprosy turned their attentions to the diabetic foot: these included Dr Paul Brand (South India, later USA) and Dr Grace Warren (now Australia): both remain active and Dr Warren still visits and operates at clinics in Thailand, the Philippines and Israel (Warren, 1999).

In this brief world tour, I will focus mainly on Asia, Australasia, South America and Africa, after a few comments on the European situation.

Europe

Marked improvements in the delivery of diabetic foot care have occurred in Europe in the last two decades. These include the introduction of diabetic foot care nurses, increasing input from trained podiatrists, the establishment of diabetic foot care teams and clinics, and, now 10 years ago, the Declaration of St Vincent (Diabetes Care and Research Group, 1990) which included an aim to reduce amputation by 50% in 5 years.

Having described the improvements that have been witnessed in many countries, extremes of contrast do exist even here. Some western European countries do not have podiatry or chiropody services and these include Spain and Greece. In many former Eastern Block countries immense problems in health care delivery exist and

amputations remain very common. An example of the extent of foot problems came from Slovenia: during a 16-month period of foot screening, 700 diabetic patients were seen and only 14% had healthy feet (Urbancic-Rovan and Stak, 1998)

Asia

Considering the vast population of Asia, there are sparse data on foot problems from this part of the world. In China, the world's most populous country, the prevalence of diabetes has risen to 0.5%–2.5% in 1995 (Boulton and Vileikyte, 1999). Thus at least 15 million Chinese have diabetes and another 18 million IGT. A national programme for diabetes has been developed, but amputations remain common, and only a few centres have established foot care teams.

India is home to at least 30 million diabetic patients and a number of diabetic foot centres have been established in large cities. However, atypical features and presentation of diabetic foot problems in this part of the world include rodents (usually rats) nibbling at insensitive feet while the patient sleeps on the floor; maggots pouring out of open wounds and red ants swarming inside dressings.

A number of countries have benefited from educational visits and training by overseas experts including Australian podiatrists providing training in Singapore and the Philippines and diabetic foot care teams from the Netherlands helping in Indonesia.

Australasia

There is a very high incidence of diabetes in the native populations of Australia (Aborigines), New Zealand (Maoris) and the Pacific Islands, and in many small islands, including Fiji, diabetic foot ulcers are the commonest cause of surgical admissions to hospital. The number of diabetic amputations in the Suva Hospital prior to the establishment of a foot care clinic was 39 in a 3-month period. After the establishment

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of a foot service, the number of admissions has been reduced to three or four per month.

In Australia, a national diabetes foot care network has been established under the auspices of the national diabetes strategy which is endorsed by the Australian government.

Africa

Of 98 presentations on the diabetic foot at the IDF meeting in Helsinki, 1997, only one originated from the continent of Africa. Some data exist from South Africa and a number of northern African states.

Due to past inequalities of health care provision, the level of foot care varies immensely throughout South Africa. There are probably more than 4 million diabetic patients in this country, with only 200 chiropodists, many in private practice. However, much improvement has occurred with most hospitals having nurse educators, and providing some form of a diabetic foot screening service.

Data are also available from Algeria and Morocco, where the prevalence of diabetes is probably >10%. A study in 14 Algerian centres reported that of 865 patients, 12% had infected foot ulcers and 7% were already amputees (Belhadj, 1998). In Rabat, capital of Morocco, 3% of the 67,000 diabetic patients had foot ulcers (Boulton and Vileikyte, 1999). In Casablanca, 15% of foot ulcers were ascribed to inappropriate traditional 'healing' methods (Slaoui and Arabou, 1998).

South America

Throughout South America the prevalence of diabetes is high, e.g. 6.5% in Paraguay (11% IGT), approximately 7% in Argentina, Brazil, Uruguay and Venezuela, and 5% in Chile. In many tropical areas, such as northern Brazil, diabetes and leprosy co-exist, each potentially resulting in high-risk feet. In Brazilia, and the surrounding region (Distrito Federal) a 'Save The Diabetic Foot — Brazil' project has started with government backing: screening and education projects are established in primary care centres throughout that province.

Elsewhere in South America, few published data on diabetic foot care are available.

Conclusions

From this brief global tour, it is apparent that initiatives to improve foot care can be found in many countries, but overall, there are vast opportunities to improve knowledge and delivery of care. However, knowledge alone is insufficient: we need to translate knowledge into change in behaviour among both health care professionals and patients.

Returning to the similarities with leprosy (Boulton, 1990), we cannot assume that diabetes can be prevented in the future as the incidence of leprosy has declined: indeed the opposite may be true. We are currently witnessing an epidemic of type 2 diabetes — and those areas with the least developed foot care services are those experiencing a rise in incidence.

I hope that many readers will attend the 3rd International Meeting on the Diabetic Foot in Noordwijkerhout this Spring (5-8 May), and that we will also welcome you to the 8th Malvern Diabetic Foot Meeting next year (10-12 May 2000). ■

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