HALF A CHEER FOR SUCCESS IN THE FIGHT AGAINST COMPLICATIONS

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We must never forget that it's not all bad news that the number of people living with diabetes in the world continues to rise. At least some of this has a good news element – people with diabetes are living longer (albeit many with established complications). There are some grounds for muted celebration in the battle against diabetes complications – just half a cheer for the moment. The burden is still too formidable and there is too much uncertainty about the present position to merit more than that.

We know that the devastating long-term complications of diabetes can be prevented or at least their onset significantly delayed by a combination of strategies and activities, all of them conceptually simple but often difficult to put into practice. They are: the prompt diagnosis of diabetes; effective control of blood glucose, lipids and blood pressure; anticipatory foot, renal and eye care; attention to diet and physical activity and avoiding tobacco use.

Lower limb amputation

This devastating complication of diabetes provides the clearest picture of some improvement over recent years. This is partly because it is, in many countries, well documented in hospital in-patient databases. The review by Moxey and colleagues,[1] while confirming that the risk of amputation in people with diabetes is still at least ten times that in people without diabetes, showed significant reductions in amputation rates in populations served by specialist foot clinics. It may well be that amputation rates have fallen by as much as 50% over the past 10 to 15 years. However, risks are still large and the data available are mainly just for the high-income countries of North America, Europe and Australia. The picture in most low- and middle-income countries is unclear. An exception to this is Pakistan which has seen a marked change recently in the availability of foot care and in which amputation rates in people with diabetes are reported to have almost halved between 2008 and 2010.[2]

Diabetic retinopathy

There are some grounds for optimism here, too, but this optimism needs to be tinged with caution in that improvements are only documented in populations in which there is an emphasis on good metabolic control and in which eye examinations, sometimes through regular screening, can be backed up by the availability of laser treatment. An example of success is the halving of the overall incidence of blindness (between 1999 and 2008) in Israel.[3] As the authors of that report comment, the decline they observed resulted mainly "from age-related macular degeneration, glaucoma, diabetic retinopathy and cataract".

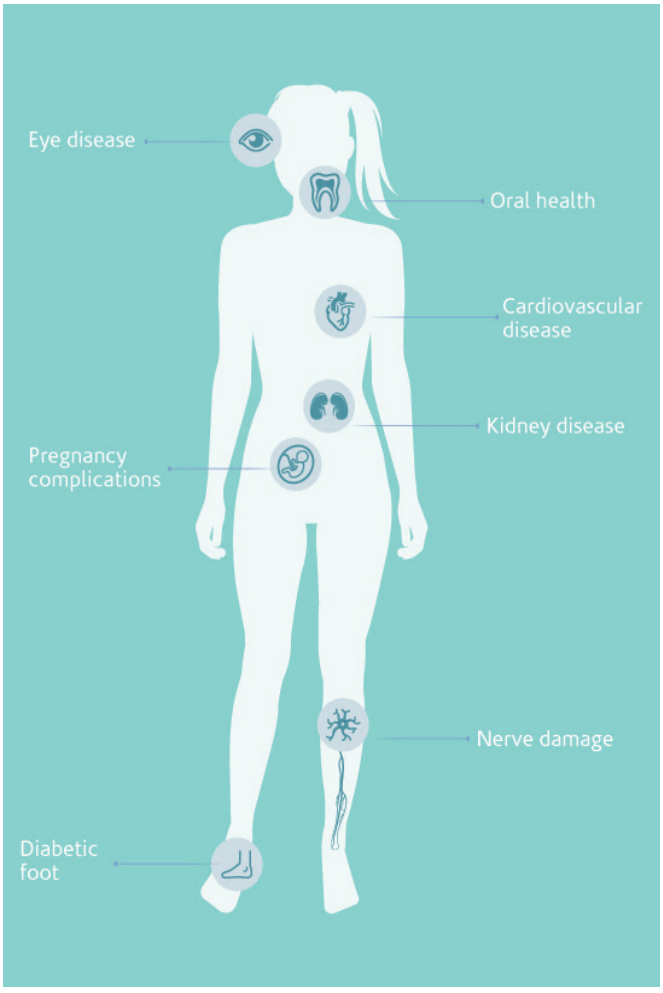
Many aspects of the UK National Health Service need fixing but it is heartening to realise that the combination of universal health coverage, a national retinal screening programme and

and ophthalmological back-up with laser treatment for all who need it has meant that diabetic retinopathy is now no longer the most common cause of blindness in working age people in England and Wales. That doubtful accolade now goes to inherited retinal disorders.

Nephropathy in youth and end stage renal disease in adults

There is much less optimism in terms of nephropathy as a complication of both type 1 and type 2 diabetes in US youth.[4] Of 96,171 commercially insured patients aged less than 18 years with diabetes, 3,161 were recorded as having nephropathy. The annual prevalence of diabetic nephropathy over the years studied (2002-2013) trebled (to 3.44%). Some of this increase may be accounted for by better identification and recording of kidney disease. However, any true increase in this patient group is, as yet, unexplained and is of great concern.

The incidence of end stage renal disease (ESRD) is dependent not only on the quality of diabetes care (particularly in relation to the early identification of nephropathy and the quality of the management of hyperglycaemia and hypertension) but also to the availability of renal dialysis and organ replacement. There is evidence that, at least in the USA,[5] changes in the incidence of ESRD have occurred in recent years – a decrease among younger adults with rates of ESRD more common now in older than in younger adults. Of course, with the rise in



Diabetes complications

diabetes prevalence seen in most countries, the absolute numbers of people living with diabetes who have ESRD has risen as have the rates in the USA when expressed in relation to the total population rather than the diabetic population. In some communities (such as first-nation Australians with diabetes), the numbers of people needing dialysis is most concerning.

Cardiovascular disease

One of the possible reasons for the increase in ESRD rates seen in older people with diabetes in the USA may be the result of declines in mortality from acute myocardial infarction. This change was the most prominent reduction reported by Gregg et al.[5]

Unfortunately, the position in low- and middle-income countries is again unclear. Realistically, and given the way that the worldwide "epidemiological transition" in long-term conditions is playing out, it would be wise to be cautious and be on our guard for a continued rising tide of heart disease and stroke in people with diabetes living in these countries. Furthermore, these life-threatening complications will be affecting relatively young people who are economically active and have family responsibilities.

Overall, therefore, there is some justification in celebrating limited success in the battle against the long-term complications of diabetes but only in some places and in some people. Three cheers are certainly not justified, nor two nor even one. One half cheer, however, just might be.

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