

Diabetes in elderly Asians

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Introduction

This paper will deal with various aspects of the epidemiology, clinical features and management of diabetes in elderly South Asian ('Asian') subjects. Data from all patients who attended the Ealing Hospital Diabetic Clinic over a 12-month period (November 1991-October 1992), will be used to illustrate some points. The 1765 patients included 781 Asians and 776 Europeans, of whom 178 Asians and 378 Europeans were aged 65+ years, and are henceforth referred to - rather loosely and perhaps inaccurately - as 'elderly'.

Epidemiology

The high diabetes prevalence within the Asian community is now well-recognized. In the Southall Diabetes Survey, the overall prevalence was almost four times higher in the Asian than in the European population¹. Broadly similar findings have emerged from studies in Leicester², Coventry³, Harrow and Tower Hamlets, and on different subgroups of Asians. In the Southall Survey, the prevalence of known diabetes in Asians over 60 years of age was 17%, and in the Coventry Study, the total prevalence (known and unknown) in subjects aged 60+ years was over 20%, reaching 30% in men aged 70+ years³.

It is important to be aware of the different, 'younger' age structure of the Asian community in Britain¹. There are relatively more children and young adults, and relatively fewer elderly, compared with the European population. Over the past two decades, this 'bulge' of young adults has progressed towards middle-age, producing a correspondingly large increase in the numbers of Asian diabetic patients.

Applying the Southall Survey prevalence data to the 1991 census data, for example, there would be 1119 Asian diabetic patients rather than the 761 found in the 1984 survey, and 273 subjects aged 65+ years, rather than 130. This represents a 50% increase in the total number, and a two-fold increase in those aged 65+ years. This marked increase in the numbers of middle-aged and elderly Asian diabetic patients is important in planning care in districts with substantial Asian communities.

The skewed population age-structure in the Asian community is reflected in the age-distribution of patients attending the Ealing Hospital diabetic clinic. Despite virtually equal overall totals of Asian and European patients attending the clinic, there were only 178 Asians aged 65+ years, compared with 378 Europeans, and only 39 Asians aged 75+, compared with 180 Europeans. Although this discrepancy might also be influenced by different referral patterns in the two groups, and by problems in establishing the true age of many elderly Asian subjects, it is apparent that currently there are relatively few elderly Asian diabetic patients, but that there will be many more over the next two decades.

Aspects of treatment and glycaemic control

Thirty-eight (21%) of the elderly Asians were receiving insulin. It is difficult to specify how many of these were truly type 1 insulin dependent patients, but the number is likely to be small (most were non-insulin dependent patients treated with insulin to improve control). Fifteen patients were receiving once daily insulin and 23 patients were receiving twice daily injections, usually of Mixtard insulin. Remarkably few practical difficulties arise when insulin treatment is commenced in such patients. The extended family structure is enormously useful in ensuring that patients cope with insulin therapy, even when there are marked physical disabilities or language problems. One hundred and seventeen patients (66%) were receiving oral hypoglycaemic drugs, and 23 (13%) were treated by diet alone.

The glycaemic control achieved in elderly Asian patients is, in the author's experience, generally poor, and worse than in their European counterparts. The mean HbA1 concentration in elderly Asians was 11.8%, compared with 11.3% in the Europeans (normal range <9%).

There are several possible explanations for this. Difficulties in achieving compliance with both diet and tablets, problems in delivering adequate patient education, and the mobility of many patients may all contribute⁴.

The importance of tight control in preventing microvascular complications has now been conclusively demonstrated in insulin-dependent patients⁵. If the United Kingdom Prospective Diabetes Study shows that the relationship also holds for non-insulin dependent patients, our attitude to the poor control of many elderly patients may have to change radically. However, the difficulties of establishing adequate control in predominantly obese elderly patients, from any ethnic group, are only too well known to all diabetologists! The main long-term threat to these patients is from macrovascular disease, particularly ischaemic heart disease, and as yet there is no firm evidence that improved control will reduce this.

Complications

The prevalence of retinopathy is broadly similar in Asian and European patients. Out of the 178 elderly Asian patients, 47 (26%) had documented retinopathy, and 17 (10%) had received laser treatment. In the 378 elderly European patients, 78 (21%) had documented retinopathy, and 22 (6%) had received laser treatment. It is probable that the visual impairment produced by lens opacities is greater in the elderly Asians than that from retinopathy. The prevalence of lens opacities in Asian diabetic subjects is not well documented, but probably exceeds that within the corresponding European group. Further studies are needed to demonstrate the scale of this important problem. Resources to cope with the patient workload for lens surgery currently lag behind those for laser treatment of retinopathy.

Several studies have shown a higher prevalence of nephropathy in Asian than in European patients^{6,7}. Twenty-six (15%) of our elderly Asians had proteinuria on routine urinalysis, compared with 33 (9%) of Europeans. Nevertheless, relatively few ever reach end-stage nephropathy and require renal replacement treatment. Only two (1%) elderly Asians - and only one (0.3%) elderly European - had a serum creatinine concentration >200 $\mu\text{mol/l}$ and retinopathy, indicating

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end-stage diabetic nephropathy. The fears of a virtual epidemic of this condition in Asian diabetic patients, and its consequences on the workload of renal units⁸, are probably unfounded. Many or most patients with proteinuria will succumb from cardiovascular causes before referral to renal units for end-stage treatment is required.

The prevalence of ischaemic heart disease (IHD) in elderly Asian diabetic patients is likely to be extremely high. Up to 70% of European non-insulin-dependent patients die from cardiovascular causes, and this figure is likely to be at least as high within the Asian community, because of their higher innate prevalence of IHD. Forty-one (23%) of our elderly Asians and 82 (21%) elderly Europeans had a definite history of myocardial infarct or angina, but this is likely to be an underestimate of the overall problem, because it does not include asymptomatic IHD, and cannot allow for patients whose first presentation of IHD is sudden death. As yet we simply do not know how to reduce the alarming morbidity and mortality from IHD in NIDDM. Every physician needs to formulate his own approach, based on the mass of data on modification of risk factors for IHD, most of which are based on non-diabetic subjects and use surrogate end-points, whose significance is often doubtful.

Considering the individual risk factors, 60 (34%) of elderly Asian patients were being treated for hypertension. Many receive low-dose thiazide diuretic therapy, which has been shown to reduce the prevalence of coronary events by an impressive 44%, and all cardiovascular events by 35% in non-diabetic elderly subjects⁹. The potentially adverse effects on glucose and lipid concentrations are trivial or absent with low-dose regimes, and it seems likely, although unproven, that the impressive reduction in IHD may also occur in diabetic subjects. Fourteen (8%) and 44 (25%) elderly Asians had total cholesterol concentrations greater than 7.8 and 6.7 mmol/l, respectively. Currently, these patients do not routinely receive lipid-lowering therapy, since the benefits in patients within this age-group - in the diabetic state or non-diabetic state - are unproven. Only 10 of 100 elderly Asian men (and none of the women) smoked cigarettes. Many of our elderly Asian patients now take low-dose aspirin therapy. The value of aspirin in the secondary and perhaps primary prevention of large vessel disease in non-diabetic subjects seems sufficiently established to advocate its widespread use in diabetic patients.

Other practical points

Education of elderly Asian patients is fraught with difficulties, many of which relate to language problems. Elderly ladies, in particular, may speak no English, and may be unable to read in any language. A broad range of educational aids is needed, to cater for the specific needs of the individual patient and their level of language skills. Booklets in English and the various Asian languages are invaluable, often for relatives as well as the patient. The British Diabetic Association booklet (*A Basic Guide to Diabetes*) costs

50p per copy, and has proved extremely useful in clinical practice. Audio-cassette tapes have also proved invaluable for patients who either cannot read or are visually handicapped. Videos are now available. Group education sessions have enormous theoretical potential, but in practice they are difficult to initiate, and attendance at them tends to be rather poor.

Defaulting from clinic attendances is a significant problem within this group of patients. There are several possible explanations for this. Patients may be on holiday in the Indian sub-continent, they may have moved to stay with other members of the extended family, or they may not have understood the details of their next clinic appointment⁴. Compliance with insulin or tablet treatment is often poor during holidays in the Indian sub-continent, and it is important to stress to patients that they should arrange another clinic visit after their return. Failure to attend other hospitals for tertiary referral purposes, notably for laser treatment, is also a considerable practical problem.

Conclusions

Diabetes is very common within the Asian community, and the number of elderly Asian patients is increasing rapidly. They commonly have poor glycaemic control, due to problems with compliance and education, although they cope remarkably well with the practical aspects of insulin therapy. The main threat to their health is from large vessel disease, although they are also prone to develop retinopathy and lens opacities. More resources are required to ensure that this vulnerable group of patients receive an adequate standard of care.

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