

EDITORIAL

DIABETES IN ASIAN INDIANS

Non-insulin-dependent diabetes (NIDDM) is a major public health problem in the developed countries. It causes renal disease and heart disease, the treatment of which is expensive to the State and to patients. Avoidance of renal disease and premature coronary artery disease would be particularly useful. High rates of non-insulin-dependent diabetes and coronary artery disease are seen in all people of Indo-Asian origin on migration. Similar high rates are now being commonly seen within affluent groups in India and Pakistan. The rates are so great to suggest that this is an epidemic: without intervention it is likely to become a massive problem.

The importance of this topic generated an UK national meeting in Leicester "Coronary heart disease in the Asian community". The proceedings of this meeting appeared as supplement to *Practical Diabetes* 1993, volume 10, and number 5.

At the meeting various authorities on the problem from throughout the United Kingdom, together with Professor Ahuja from Delhi, debated ways to improve the delivery of care to prevent this epidemic.

This would be relatively easy to achieve if the exact cause was known for either non-insulin-dependent diabetes or coronary artery disease. At present we can only loosely describe the disease as being caused by atherosclerosis or atheroma. We must therefore look at changes in risk factors. There are activities we know which will increase or decrease the chances of getting coronary artery disease or non-insulin-dependent diabetes. For example, a car is a useful means of transport but it will decrease the exercise taken each day and, therefore, again marginally increase the chances of coronary artery disease and non-insulin-dependent diabetes.

Education of the patient and general public is vitally important, because risk factors are of such social and cultural importance. Since education is so important the symposium tried to focus on educational techniques as well as content.

Identification of risk factors

What then were the various opinions on risk factors, particularly for Indo-Asian who has non-insulin-dependent diabetes?

- 1) Fat intake has been found to be high in migrant Indo-Asian groups compared with White Caucasian groups.
- 2) Triglycerides are particularly high in all migrant Indo-Asian groups when compared with the White Population.
- 3) Blood pressure is at least similar and sometimes lower in Indo-Asian groups compared to White Europeans. This increases the significance attached to even marginally raised blood pressure.
- 4) Physical activity was significantly reduced, particularly in the young Indo-Asian male.
- 5) Waist-hip ratios were increased in the Indo-Asian Population.
- 6) Psychological factors: it has been suggested that stress is likely to be higher in Indo-Asian migrant groups compared with European White. Stress may be an important cause of coronary artery disease in the White and it would seem likely that this might apply to Indo-Asian migrant groups. In this context, migrating from rural village to large city would be just as likely to induce stress.
- 7) There was considerable debate on insulin resistance versus raised glucose levels or abnormal insulins as a cause of coronary artery disease. Certainly there seems to be a very close association between insulin resistance and coronary heart disease (C.H.D.) in some people.
- 8) There are other candidate risk factors for coronary artery disease and these include fibrinolytic activity and many others.
- 9) One of the key factors that radically increases the chance of coronary artery disease is proteinuria and probably also microalbuminuria. Studies have shown that microalbuminuria and proteinuria are both major causes of increased mortality from coronary artery disease in IDDM White Caucasian populations. Similar findings are now also being reported for the non-insulin-dependent diabetics. Microalbuminuria and proteinuria are far commoner in the Indo-Asian population so it would not be surprising for the Indo-Asian person to be more at risk of coronary artery disease.
- 10) Age allows two differing strategies of intervention. In the first, the young person is taught a healthy lifestyle so that there will be no accumulation of risk with age. The most classical example would be smoking. If one had never smoked then there would be no increased risk: if one has smoked, then the increased risk

relates to the number of years smoking occurred. The second strategy allows us to look at an "at risk" population. The elderly are known to be at a high risk of dying from myocardial infarction so that even in small studies many deaths occur. This has allowed antihypertensive treatment in the elderly to be shown to be beneficial in reducing the number dying from coronary artery disease.

- 11) Smoking: This is relatively uncommon in Indo-Asian migrants. But, the evidence is strong that smoking is an important risk factor for myocardial infarction in all racial groups. If someone at "high risk" smokes, then they put themselves in the "very high risk" group.
- 12) Alcohol: There is a Western European phenomenon that produces a paradox. A French person smokes a lot, eats a lot of animal fat, and takes as little exercise. Their English neighbour has similar habits, yet the French have far fewer heart attacks than the English. One possible explanation is in their drinking patterns. Drinking wine, particularly if it is red wine, is thought to be protective. Alternative explanations are: large amounts of fresh vegetables and fruit consumption and cooking with olive oil.

Action

What then is the action needed to reduce the epidemic of CHD in Indo-Asian people. It must be incorrect to assume that the risk factors for Indo-Asian people are bound to be just the same as for the White Caucasian. The first requirement must be research into Indo-Asian diabetes and CHD. A measure of the international view of the importance of such research is the number of papers published in "Medicine", a database of research journals. 55,278 papers were published between 1989 and 1983 on heart disease, 18,736 on diabetes. There were far fewer papers on the combined problem. Papers mentioning all 3: diabetes, CHD and Indo-Asian people amounted to 6 (1-6). International pressure from all concerned people should aim to redress this imbalance.

Within the subcontinent there is a need for communication between academicians, clinicians and patients. This needs also to extend to Indo-Asian people worldwide. All such people need to know about any advances, but also any lack of advances in treatment.

The simplest way to achieve this is to set up a network that concerned people can contact.

Research published on CHD, diabetes and the Indo-Asian person should be readily available. Despite the advent of the computer written bibliography is the easiest to disseminate. We should have available all published research on the "Indo-Asian with Diabetes", and also a list of any relevant literature, videos, audiocassettes and posters that may be useful.

Finally, we need to educate all people into risk limitation. Each risk should be assessed for each society, but with an accepted aim to reduce the rates of NIDDM and CHD.

In conclusion, I believe that an international Network needs to be established. It should have a series of aims:

1. International Pressure.
2. Collaboration between Academicians, Clinicians and Patients.
3. Bibliography.
4. Education.
5. Improved outcome, reducing rates of NIDDM and CHD.

Dr. A. C. Burden*

REFERENCES

1. Woods KL, Samanta A, Burden AC. Diabetes mellitus as a risk factor for acute myocardial infarction in Asians and Europeans. *British Heart Journal*, 1989; 62: 118-22.
2. Hughes K, Yeo PP, Lun KC, Thai AC, Sothy SP, Wang KW, Cheah JS, Phoon WO, Lim P. Cardiovascular diseases in Chinese, Malays, and Indians in Singapore. II. Differences in risk factor levels. *Journal of Epidemiology & Community Health*- London, 1990; 44: 29-35.
3. Seedat YK. Hypertension and vascular disease in India and migrant India populations in the world. (Review). *Journal of Human Hypertension*. 1990; 4: 421-4.
4. Ragoobrisingh D, Davidson JB. The effect of demographic factors on serum lipids in diabetics of Trinidad and Tobago. Possible association with ischaemic heart disease. *West Indian Medical Journal*, 1989; 38: 99-104.
5. Hughes LO, Raval U, Raftery EB. First myocardial infarctions in Asians and White men. *BMJ*. 1989; 298: 1345-50.
6. Knight TM, Smith Z, Whittles A, Sahota P, Lockton JA, Hogg G, Bedford A, Toop M, Kernohan EE, Baker MR. Insulin resistance, diabetes, and risk markers for ischaemic heart disease in Asian men and non-Asian in Bradford. *British Heart Journal*, 1992; 67: 343-50.

* From Leicestershire General Hospital, Leicester, U.K.