Coronary heart disease in Indians, Pakistanis, and Bangladeshis: aetiology and possibilities for prevention

Sir—I enjoyed McKeigue’s editorial and agree that a reduction in the risk of coronary heart disease in South Asians is likely to require different strategies from those recommended for the general population in the United Kingdom. I do not, however, agree that the basis for advising South Asian communities to reduce saturated fat intake on a mass scale so as to lower average plasma cholesterol is open to question. It is possible that nutritional adaptation to dietary intakes resistant to the risk of coronary disease in the same race as from community to community for the same race. It may also vary depending upon the diet and lifestyle factors. It seems that obesity, which is due to intake of energy and decreased physical activity, is the most significant consequence of nutritional adaptation. It is beneficial to enhance physical training to decrease obesity and help to prevent coronary disease but exercise may not work unless saturated fat and cholesterol intake are decreased. Similarly, it may be difficult to achieve weight loss until the energy intake as fat is also reduced. Reducing energy intake by decreasing carbohydrate and protein intake may not provide the desired benefit.

Secondly, it seems to be a mistake to compare dietary intakes of South Asian migrants with national average intakes in the United Kingdom because diet and lifestyle changes in Indians are of a more recent origin than in Britons. Whereas native Britons may have adapted to these changes, South Asians may have maladapted because of poor conditions in childhood followed by affluence.

It seems justifiable to compare the dietary intakes of migrants with those of Indian natives. Apart from slightly higher intake of energy (2140 v. 2415 kcal), Indian migrants to the United Kingdom also consume significantly more total fat per day (25·6 v. 38·8% kcal) and less carbohydrate (61·0 v. 48·6% kcal) than native Indians. Perhaps Indians in the United Kingdom also take more refined carbohydrates and processed snacks in between meals than native Indians (table). This would enhance fasting postprandial hyperinsulinaemia and hyperglycaemia which are both atherogenic. An increased intake of fruits, vegetables, and legumes decreases fasting and postprandial hyperinsulinaemia and hyperglycaemia as well as reducing the intake of foods rich in energy, saturated fat, and cholesterol and provides the soluble dietary fibre and antioxidant vitamins and minerals that are protective against coronary disease. Because coronary heart disease is a multifactorial problem, the efficacy of weight loss and physical training alone is likely to be as disappointing as discontinuing the use of cholesterol lowering. I suggest an increased consumption of fruits, vegetables, and legumes in their package of weight loss and physical activity for prevention of coronary disease in South Asians which we have found useful in our patients.

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Early and late arrhythmias after the Fontan operation: predisposing factors and clinical consequences

Sir—Cardiac arrhythmias, well recognised as complications of the Fontan operation were carefully investigated by Gewillig et al in 104 consecutive patients (Br Heart J 1992;67:72-9). Early and late arrhythmias (bradycardia, intermittent sinus v. junctional rhythms, atrial v. junctional tachycardias, flutter, runs of extrasystoles, etc) became disturbing complications in this clinical series; it is important to understand possible mechanisms underlying such rhythms and worthwhile to find procedures for avoiding them. Similar arrhythmias complicated the Mustard and Senning operations which also involve incisions into the right atrium. We call attention to an experimental study in which postganglionic innervation of the automatic pacemaker cells within the sinoatrial nodal (SAN) region of the dog heart was interrupted.

Specifically, two transmural lesions (one longitudinally along the ventral caval surface from pericardial reflection caudally to the pulmonary vein fat pad and another from the end of this cut transversely across the sulcus terminal to a point midway across the anterior (ventral) surface of the right atrium) interrupted vagal postganglionic innervations to the sinoatrial node. The incisions, however, did not interrupt vagal regulation of the conductile system and atrioventricular nodal (AVN) region and did not appreciably influence sympathetic postganglionic nerves to either the SAN or AVN regions.

Recognition of subepicardial and intramural nervous pathways to critically involved target tissue may be potentially important. Neither Gewillig et al nor others take note of such potentially selective or partial denervations of critically involved target tissue by the relatively extensive incisions. While age, body size, and mean pulmonary artery pressure may well be important risk factors in these clinical series, we suggest that the precise location of the axonal incisions in relation to the regulatory nerve pathways may also be relevant to improving the outcome of the Fontan (Mustard, Senning) operations. Avoiding transection of such nerve pathways may preserve sympathetic and parasympathetic supply to automatic or conductile tissues or both which are actively involved in modulating every beat of the heart.

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