Coronary heart disease has been regarded as a widespread disease, particularly in the industrialized and developed countries. Inspite of multipronged investigations its exact etiology is still unknown.

In West Bengal, the incidence of heart disease, heart block in particular, is quite high as compared to those in other provinces especially among the Bengalees. This was recognised from the large number of implantation of pace makers. This could well be due to some extraneous factors which operate here, but not in other states. The importance of some factors, possibly of dietary origin, could be considered.

Oils from the seeds of different Brassica varieties has been used for many years in human in West Bengal. These oils are characterised by the presence of long chain unsaturated fatty acids, erucic acid, (mainly 22:1 fatty acid), which may account for as much as 50% of its total fatty acids. Mustard and rapeseed oil from Brassica seeds are considered to be the most commonly used edible oil by human population and they consume about 30-40 g per day.

The pathological changes, could be in the heart, adrenal, skeletal muscle and other organs, but mostly on the myocardium. These changes could be attributed to the erucic acid content of the oils. Erucic acid is not found in body fat, but it can be detected after feeding of oils containing it.

Erucic acid content of mustard oil is very high even 50% of the total fatty acid. Few experimental studies with 15% and 20% mustard oil have been carried out (Gopalan et al., 1974, Ray et al., 1979, Bhatia et al., 1979). The results are nevertheless interesting. They definitely indicate the possibility of hazards arising from excessive intake of mustard oil. It, therefore, appeared important to study different concentration of mustard oil in the diet for varying periods in experimental model, to explain the mechanism of lipidosis, fibrosis and impaired heart mitochondrial metabolism as a result of feeding diets containing erucic acid.

Although there are no reports suggesting high incidence of cardiac abnormalities in areas of the country where mustard oil is traditionally used, it may be justifiable on the basis of the experimental findings to relate these observations to the human situation. On the basis of the existing finding, on animals it seems reasonable to assume that the human heart could react in a similar manner and therefore, it was thought worthwhile to estimate the lipid composition, fatty acid profile and amount of collagen of the
myocardium from autopsy cases presumably consuming mustard oil as their main dietary fat. To indicate the definite hazards arising from intake of mustard oil, a large number of heart from autopsy cases among the populations where mustard oil is traditionally consumed could be carried out.

However, in the recent years clinical investigations have produced evidence that in the living system the composition and the nature of dietary fats have a profound influence on the concentration of blood lipids. This has introduced a new concept of the role played by the dietary fat in the development of heart disease. Clinical trials in various countries have shown that vegetable oils rich in unsaturated fatty acids depress the serum cholesterol level in normal individuals. Little data on the pathogenecity of erucic containing oils in human beings are present (Tremolieres et al., 1971, 1972, Tremolieres and Carre, 1972, Jaillard et al., 1973). It is of practical importance to test the relevance of the observation from experimental studies to the human situation.

Further analysis of serum lipids and enzymes could be carried out in heart block patients and also in normal subjects who have consumed mustard oil for long periods to indicate whether the consumption of mustard oil traditionally is associated with any abnormality in lipid profile and enzyme activities.