

ABSTRACT

CORONARY HEART DISEASE : AN APPLICATION OF LIFE TABLE AND AGE AT ONSET STUDY

By

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This research aims at exploring the impact of coronary heart disease on population mortality and identifying the determinants of age at the onset of the disease.

The multiple decrement life table method and the cause-elimination life table method were used with the male and female death statistics from Ministry of Public Health for the years 1991 to 1995. Findings indicated the trend of the increased probability of dying in the later year of life. The annual percentage of coronary heart disease deaths and the life expectancy gains derived from the cause-elimination life table for both males and females also increased during the period of 1991 and 1995.

The morbidity study subjects were 188 male and female coronary heart disease patients obtained by multistage samplings from 12 hospitals across the country. The percentage of male and female samples were 57 and 43 respectively. The mean age of the whole group was about 60. Most of them were married, attained a primary level of education, worked in elementary

occupations and adopted the Thai culture as their way of life. The proportion of urban and rural residence was 1:1.

Almost half of the group was diagnosed as having coronary heart disease. The profile of the related factors showed that the prevalence of hypertension, diabetes, smoking, alcohol drinking and family history of coronary heart disease were 33.5, 38.3, 52.1, 31.9 and 26.6 respectively. The mean levels of cholesterol, triglyceride, low-density lipoprotein / high-density lipoprotein ratio, body mass index and inactive index were 217.82, 162.47, 3.14, 24.22 and 2.18 respectively.

A regression analysis was used to examine determinants of age at onset. The results revealed that the negative statistical significant determinants of age at the onset of coronary heart disease are mainly the biological factors, namely, low-density lipoprotein / high-density lipoprotein ratio, body mass index and family history of coronary heart disease; while diabetes exerts a positive impact. Years of education is the only socio-economic factor showing a negative relationship with age at onset of coronary heart disease.

Age at onset was scrutinized further by being use to divide samples into two groups: those having the onset before age 60, being identify as early onset group, and those having the disease after age 60. A logistic regression was applied to determine the predictor of early onset. The study found that low-density lipoprotein / high-density lipoprotein ratio, family history of coronary heart disease and years of education are predictors of increasing the chance of early onset. Diabetes is the predictor of decreasing the early onset probability.

Findings from the study provide surveillance tools for age at deaths and monitoring tools for “age at onset” of coronary heart disease.