Editorial

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Mortality Trends of Cardiovascular Disease in Korea; Big Challenges in Ischemic Heart Disease

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It is important to figure out ways to make the best use of medical resources in public health as there are limited means for achieving the desired ends. The data regarding the burden of the specified disease and its annual trend are necessary to develop strategies for improving cost-effectiveness and disease prognosis. The modalities for evaluation and management are similar regardless of race or national origin. However, there are many discrepancies in epidemiologic trends which include disease prevalence and variation in risk factors and mortality rates according to the regional location even within one country.[1] Cardiovascular disease (CVD) has been the most important cause of death worldwide as well as in Korea.[2] Trends in CVD have been reported in many countries and races. However, until now, there is only limited information regarding the trends in CVD in the Korean population.

Lee et al.[3] investigated the changing patterns of CVD mortality in Korea by using the Korean Statistical Information Service data recorded over 30 years from 1983 to 2012, and they presented their findings in this issue of Korean Circulation Journal. During these 30 years, mortality rates for total heart disease, rheumatic heart disease, hypertensive heart disease, and atherosclerosis other than stroke were markedly decreased. This could be largely attributed to improvement of socio-economic status and management of risk factors such as hypertension and dyslipidemia. An interesting result of the present study was that the mortality rate for ischemic heart disease (IHD) showed a different pattern when compared with other categories. Age-standardized mortality from IHD reached its peak in 2002-2003, and then it showed a decreasing pattern during the decade in this study. This suggested that the increase in IHD prevalence with rapid aging of the Korean population might be associated with growing annual mortality in the early period.[4] Then, improvement in treatment and prevention of IHD caused a decline or stable trend in IHD prevalence.[5][6] Nevertheless, the absolute number of IHD deaths still continuously increased annually. Prevalence and mortality rate patterns in Korea were similar to those in Japan and United States.[7][8] Disease burden of IHD accounted for a large share of burden of CVD in the Korean population.

The following points should be considered while interpreting the results of the present study:

1) As mentioned by the authors, the cause of death could have been misclassified or unclassified. There is a possibility that the CVD mortality rate was underestimated especially in the early phase of this study. Also, the improvement in healthcare service quality and accessibility could have affected the prevalence through the enhancement of diagnostic accuracy. It is possible that death due to unknown causes in the early phase could have been classified into CVD death in the late-term period.

2) There is no nationwide data regarding the incidence of CVD. Prevalence is an important factor that affects the mortality rate and diagnostic accuracy. Thus, the authors could not assess the causes of changing mortality trends.

3) The present study did not consider the data regarding the in-hospital death rate. About 30-40% of patients with acute myocardial infarction died before arrival to the hospital. The changing patterns

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of in-hospital death due to IHD might be helpful in developing a strategy to improve the prognosis and to analyze the data more accurately.

Although there were several limitations, the present study was the first report to analyze nationwide mortality data on the Korean population spanning over 30 years. Understanding the changing pattern of CVD burden is helpful so as to use the limited medical resources efficiently and properly.

References

1. Zhang XH, Lu ZL, Liu L. Coronary heart disease in China. *Heart* 2008;94:1126-31.
2. Lee KS, Park JH. Burden of disease in Korea during 2000-10. *J Public Health (Oxf)* 2014;36:225-34.
3. Lee SW, Kim HC, Lee HS, Suh I. Thirty-year trends in mortality from cardiovascular diseases in Korea. *Korean Circ J* 2015;45:202-209.
4. Hong JS, Kang HC, Lee SH, Kim J. Long-term trend in the incidence of acute myocardial infarction in Korea: 1997-2007. *Korean Circ J* 2009;39:467-76.
5. Kim RB, Kim BG, Kim YM, et al. Trends in the incidence of hospitalized acute myocardial infarction and stroke in Korea, 2006-2010. *J Korean Med Sci* 2013;28:16-24.
6. Kim HK, Jeong MH, Lee SH, et al. The scientific achievements of the decades in Korean Acute Myocardial Infarction Registry. *Korean J Intern Med* 2014;29:703-12.
7. Rosamond WD, Chambless LE, Folsom AR, et al. Trends in the incidence of myocardial infarction and in mortality due to coronary heart disease, 1987 to 1994. *N Engl J Med* 1998;339:861-7.
8. Takii T, Yasuda S, Takahashi J, et al. Trends in acute myocardial infarction incidence and mortality over 30 years in Japan: report from the MIYAGI-AMI Registry Study. *Circ J* 2010;74:93-100.

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