Sudden Unexpected Death in Elderly Population in Thailand: Leading Causes and Associated Factors

Chalothorn Taesilapasathit¹  Prin Vathesatogki²

¹Department of Medicine, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok 10400, Thailand, ²Division of cardiology, Department of Medicine, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok 10400, Thailand

Background: Sudden unexpected death (SUD) is the most common cause of death worldwide, accounting for more than 50% of all death from cardiovascular disease. However, most studies have been performed in population aged 18-60 years. To date, there is little information about the elderly mortality and the true international incidence of SUD in elderly population is unknown.

Objective: We aimed to identify incidence and associated factors for sudden unexpected death in elderly population (aged 60 years and above) in Bangkok, Thailand.

Methods: The SUD autopsy reports performed in Division of Forensic Pathology at Ramathibodi Hospital, Mahidol University between January 2010 and December 2014 were included. These cases underwent an initial EMS referral screen and subjects who died of a non-natural causes, not an Asian population, and incomplete data were excluded. Death certificate, public and medical records were reviewed and adjudicated to confirm sudden unexpected death cases.

Results: Among 1,836 autopsy reports, 730 cases were elderly population (range from 60 to 99 years). Exclusion of non-natural cause of deaths, denying autopsy, and incomplete data, 142 sudden unexpected deaths including 86 men and 56 women were identified. In addition, 88 cases were noted with cardiac cause; whereas, 54 cases of non-cardiac cause were observed. In cardiac cause, the most common cause of SUD was acute myocardial infarction, followed by coronary atherosclerosis and cardiomyopathy. In non-cardiac cause, infection was the most common cause of SUD, followed by cerebrovascular disease, malignancy, pulmonary, liver disease, and kidney disease. There were more cardiomegaly and left ventricular hypertrophy in the cardiac group compared to the non-cardiac group. Diabetes mellitus and hypertension were common underlying diseases among elderly SUD cases. There was no difference in sex and mean body mass index between cardiac and non-cardiac SUD.

Conclusion: The overall estimated incidence of sudden unexpected death in elderly may account for approximately 19% of all deaths. The most common cause of SUD is coronary atherosclerosis. There is more cardiomegaly and left ventricular hypertrophy in cardiac death. Following the overall SUD cases, women have a lower estimated incidence of sudden unexpected death than men.

Keywords: Sudden unexpected death, Elderly, SUD, Autopsy