Causes of Hospitalization and Death among Newly Diagnosed HIV–infected Adults in Thailand

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Background: HIV infection is still a major health problem in Thailand. The National AIDS Program has been established with the availability and accessibility of antiretroviral therapy (ART) throughout the country. However, more than half of newly diagnosed HIV-infected patients enter to receive care with a very low CD4 cell count, leading to serious complications, disability, and death.

Objective: We aimed to determine the causes of hospitalization and death among individuals with newly diagnosed HIV infection. Causes of hospitalization were categorized into AIDS-defining illness (ADI) and non AIDS-defining illness (non-ADI). Predicting factors of hospitalization with ADI were determined by logistic regression.

Methods: A retrospective cohort study was conducted among adult (aged >15 years) HIV-infected patients admitted to Ramathibodi Hospital between January 2011 and December 2016. The list of patients was retrieved from the hospital database using International Classification of Diseases, 10th revision (ICD-10) codes.

Results: A total of 148 patients were included in the analysis. Of all, 114 (77%) patients were men and median age was 39 (30-47) years. Baseline median (IQR) CD4 cell count was 79 (24-218) cells/mm3. The most common route of HIV acquisition was heterosexual (62%). Prevalence of hepatitis B and C virus co-infection was approximately 10% each. The median (IQR) length of hospital stay was 8 (4-16) days and 6 (4%) patients were admitted in intensive care unit. Fifty percent of the patients were admitted with ADI. Common opportunistic infections were Pneumocystis jirovecii pneumonia (40%), tuberculosis (38%), and cytomegalovirus infection (14%). Causes of non-ADI were medical condition (e.g. sepsis, myocardial infarction, and Guillain-Barré Syndrome), diseases of surgical condition, and diseases of eyes. By multiple logistic regression, CD4 cell count was the only significant associated with ADI of hospitalization (odds ratio 0.85 per 10 cells increased; 95% confidence interval 0.80-0.90, p <0.001). A total of 136 (92%) patients were discharged home, while 4 (2.7%) patients were transferred to another hospital, and 8 (5.4%) patients died.

Conclusion: Half of newly diagnosed Thai HIV-infected patients were hospitalized with ADI. The importance of early detection of HIV infection leads to early ART initiation and prevention of serious complications related to HIV infection.

Keywords: AIDS, Death, HIV, Hospitalization