Abstract

Background:
From 1984 to the end of 2001, the cumulative number of HIV-infected citizens in Taiwan has reached 3614, and the number is increasing rapidly. Although highly active antiretroviral therapy (HAART) can prolong the life for HIV-infected patients, HAART is expensive and life-long therapy is needed. To ensure an appropriate allocation of the resource, cost-effectiveness analysis is needed. In this study, we calculated the quality adjusted survival (QAS), average lifetime HAART cost per patient, and the cost-effective- ness of HAART from empirical data.
Purpose:
(1)To determine the quality-adjusted survival of HIV-infected patient.
(2)To estimate the cost-effectiveness of HAART.
Method:
(1)We obtain the data of quality of life from the registry data of Center of Disease Control (CDC) in 2001. Then, we estimate the life expectancy based on the software of MC-QAS system designed by Dr. Hwang Ying-Shinag of Academia Sinica to estimate the adjusted quality of life survival of HIV-infected patients.
(2)According to the result of adjusted quality of life survival, we estimate the cost effectiveness of HAART.
Major findings:
(1)Under HAART treatment, the lifetime survival of HIV patients (without AIDS) were expected to increase from 136 months to 206 months, and that of AIDS patients were expected to increase from 17 months to 101 months.
(2)The immediate lifetime cost for an average HIV patient (without AIDS) was 3.28 million N.T. dollars, and that for an average AIDS patient was 1.71 million N.T. dollars. If paid through the next 50 years, the cumulative cost will be 5.79 million N.T. dollars for an HIV patient (without AIDS), and 2.61 million N.T. dollars for an AIDS patient.
(3)Cost-effectiveness of HAART: the medical cost of a HIV patient (without AIDS) is 0.038 to 0.040 million N.T. dollars per QALY gain, and that of an AIDS patient is 0.027 to 0.030 million N.T. dollars per QALY gain.
Conclusion and suggestion:
(1)HAART is an expensive treatment but probably cost-effective.
(2)Prevention is important to minimize the rising cost in the future.

Keywords: acquired immunodeficiency syndrome；cost-effectiveness analysis；quality adjusted survival；highly active antiretroviral therapy