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## Comment on the intervention of Traditional Chinese Medicine on survival rates of patients living with human immunodeficiency virus and acquired immune deficiency syndrome

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### Abstract

Despite many differences between Traditional Chinese Medicine (TCM) and conventional medicine, the use of TCM in the treatment of human immunodeficiency virus and acquired immune deficiency syndrome (HIV/AIDS) is increasingly recognized and accepted by patients. Recent research findings on the benefits of Chinese herbal medicine on long-term survival in patients with HIV/AIDS are encouraging and hopeful, but inconclusive. More research is needed.

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**Key words:** HIV; Acquired immunodeficiency syndrome; Medicine, Chinese traditional; Survival rate; Combination antiretroviral therapy

To date, acquired immune deficiency syndrome (AIDS) remains a fatal disease with limited therapeutic options. In the past 30 years it has claimed the lives of millions, mostly in developing countries, and is the leading cause of infection-related death in many countries. Thus, survival rates are an important indicator in evaluating the long-term curative effect of treatments on the disease.

In China, numerous infectious diseases [such as severe acute respiratory syndrome (SARS, influenza A virus subtype H1N1, encephalitis, and hepatitis] have been successfully treated with TCM, together with a variety of other clinical measures. According to the theory behind TCM, AIDS is an infectious disease in which the invasive pathogen causes an imbalance of yin and yang and disharmony of internal pathophysiological function and external natural environment. TCM has been used to treat AIDS for many years, and its effectiveness has been demonstrated, with surrogate outcome measures such as reducing HIV viral load, increasing CD4 counts, improving immunity, ameliorating symptoms and signs, improving the health-related quality of life and counteracting the effects of anti-retroviral drugs.<sup>1-3</sup> But few reports, especially long-term studies, on the survival rates of TCM-treated AIDS patients are published. Following a literature review on TCM treatment of human immunodeficiency virus and AIDS (HIV/AIDS), we believe that patients can benefit from TCM, with improvement in survival rates. The main reasons are as follows:

First, HIV is a chronic condition with a long incubation period before AIDS presents, making early treatment vital to improve survival rates. Because the efficacy of combination antiretroviral therapy (cART) is compromised by its risk of side-effects and drug resistance, TCM has a role in treating those patients in whom cART is no longer an option.

Second, TCM embraces the holistic approach. Chinese medicine practitioners often treat patients using highly individualized interventions such as adjusting the balance of "Yin" and "Yang" and harmonizing the internal pathophysiological function and external natural environment changes by combining empathy and psychological counseling. Consequently, survival rates may improve. In addition, TCM has also been used as adjunctive therapy in some fatal diseases such as cancer, in which it has been suggested to lower the risk of death.<sup>4</sup> Other benefits of TCM that could prolong survival include the inhibitory activity of many Chinese herbs against HIV activity,<sup>5</sup> the lower cost of TCM as compared with conventional medicine,<sup>6</sup> and the positive immunoregulatory effect of TCM.<sup>7,8</sup>

Last, in the absence of suitable methodology to verify the curative effect of TCM in the laboratory, the evidence on survival rates in patients with HIV can be extrapolated from clinical research. But in the past few decades, little research has been conducted in this regard, and wherever present, studies are of poor quality, based on small sample sizes, with limited follow-up. Recently, a few studies have shown encouraging and hopeful trends. For example, in a cohort of <sup>11</sup> 385 patients with AIDS, in which 165 patients received Chinese herbal medicine (CHM) as a 16-herb formula for 14 days to 9 months, the 8-year survival rate was 87% in CHM users and 34% in CHM nonusers [increased survival probability for CHM user, 9.6; 95% confidence interval (6.0, 15.4);  $P < 0.0001$ ]. There were no deaths in patients who received CHM for 6 to 9 months following treatment and no survivors experienced severe adverse events, or progression of the disease. These results show that CHM may be beneficial in improving long-term survival in patients with AIDS. However, there were some shortfalls in this study, e.g. sampling methods were not clearly described, and the difference in the effect of confounders (such as cART use, CD4 counts, HIV plasma loads, complications, psychological states, and family income at baseline), between CHM users and non-users were not adequately considered. In another study<sup>10</sup> comprising 1666 people living with HIV (PLHIV), and 102 591 person-months of follow up, 312 (18.7%) patients died in 6 years. The total mortality rate over the study period was 3.6 per 100 person-years, which was lower than global rates.<sup>11</sup> But being a retrospective study, the main criticism was the absence of a control group, which discounts the conclusion that TCM could increase survival rates and lengthen life span in PLHIV.

In conclusion, Chinese herbal medicine may improve

the long-term survival of patients with HIV/AIDS, but more robust research using multicenter, double-blind, randomized, controlled studies are required.

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