
During the 1990s, Cuba was able to overcome a severe crisis, almost without negative health impacts. This national retrospective study covering the years 1989–2000 analyses the country’s strategy through essential social, demographic, health process and health outcome indicators. Gross domestic product (GDP) diminished by 34.76% between 1989 and 1993. In 1994 slow recuperation started. During the crisis, public health expenses increased. The number of family doctors rose from 9.22 to 27.03 per 104 inhabitants between 1989 and 2000. Infant mortality rate and life expectancy exemplify a series of health indicators that continued to improve during the crisis years, whereas low birth weight and tuberculosis incidence are among the few indicators that suffered deterioration. GDP is inversely related to tuberculosis incidence, whereas the average salary is inversely related to low birth weight. Infant mortality rate has a strong negative correlation with the health expenses per inhabitant, the number of maternal homes, the number of family doctors and the proportion of pregnant women receiving care in maternal homes. Life expectancy has a strong positive correlation with health expenses, the number of nursing personnel and the number of medical contacts per inhabitant. The Cuban strategy effectively resolved health risks during the crisis. In times of serious socio-economic constraints, a well conceptualized public health policy can play an important role in maintaining the overall well-being of a population.


Objectives We studied the effect of antiretroviral therapy (ART) on the quality of life (QOL) of Cubans with HIV/AIDS. Methods We conducted a cross-sectional study including administration of the Medical Outcomes Study-HIV Health Survey Questionnaire to a representative sample of the 1592 Cubans receiving ART in 2004. For univariate analyses, we compared mean HIV scale scores. We used logistic regression models to estimate the association between role function and year of diagnosis, between pain and sex, and between health transition and region of diagnosis, with adjustment for demographics, ART regimen, and clinical status. Results There were 354 participants (73 women, 281 men). Scores for all functional activities showed means higher than 80 out of 100. Pain interfered more in women than in men (73.2 vs 81.9; p=0.01). When HIV diagnosis occurred after 2001, the probability of experiencing difficulties performing work (odds ratio [OR] = 4.42; 95% CI = 1.83, 10.73) and pain (OR = 1.70; 95% CI = 1.01, 2.88) increased compared with earlier diagnosis. People treated with indinavir showed a greater perception of general health (58.9 vs 52.4; p=0.045) and greater health improvement (78.6 vs 67.8; p=0.002). Conclusions Although Cubans receiving ART are maintaining a high QOL, we observed significant differences by sex and time of diagnosis. QOL assessment can serve as a health outcome and may allow identification of QOL reductions potentially related to ART side effects.

Leukopenia is a severe condition resulting from both pathological processes and some treatments, like chemotherapy in cancer patients. However, the activation of the patient immune system is required for the success of immunotherapeutic strategies, as cancer vaccines. In this regard, leukopenia constitutes a major hurdle to overcome, mainly due to the impairment of cytotoxic T lymphocyte (CTL) responses. Adjuvants are basic components of vaccine formulations, which might be useful to stimulate immunity under this immunosuppressed condition. To this aim, we tested the capacity of a novel nanoparticulated complex, very small size proteoliposomes (VSSP), to promote CTL even in a leukopenic scenario. Noteworthy, we observed that a VSSP-based OVA vaccine induced a normal antigen-specific CTL response in mice rendered leukopenia by the administration of high doses of the chemotherapeutic agent cyclophosphamide (CY), while under the same conditions the OVA antigen formulated in the TLR-3 agonist polyinosinic-polycytidylic acid (P(I:C)) was ineffective. Moreover, an appropriate combination of VSSP with the P(I:C) vaccine was able to restore the CD8(+) T cell effector function in leukopenic mice. VSSP induced not only a faster repopulation of immune cells in CY-receiving animals, but also enhanced the recovery of memory T lymphocytes and myeloid dendritic cells (DCs) while simultaneously abrogated the immunosuppressive capacity of myeloid-derived suppressor cells (MDSCs). Our results suggest that VSSP could be a particularly suitable immunomodulator to be used in CTL-promoting active immunotherapy strategies operating in severe immune compromised scenarios.