

HIV/AIDS and CAM

Said I. Shalaby

*Department of Complementary Medicine, Medical Division, National Research Centre, Cairo, Egypt.
(Prof. of Tropical Medicine, Gastroenterology & Hepatology)*

***Corresponding Author:** Said I, Shalaby, Department of Complementary Medicine, Medical Division, National Research Centre, Cairo, Egypt.

ABSTRACT

HIV/AIDS is a spectrum of conditions caused by infection with the human immunodeficiency virus (HIV). There is no cure or vaccine; however, antiretroviral treatment can slow the course of the disease. HIV/AIDS has had a great impact on society; as an illness and of economical value.

Patients involved in conventional care; use CAM to complement conventional therapies for specific symptoms or problems rather than to the exclusion of conventional care. Patients with HIV seem to use CAM for a variety of reasons. This may be doing so as an alternative to traditional medicine, as opposed to complementing prescribed treatment regimens. The inconsistent use of antiretroviral drugs is problematic; given its association with drug resistance. Therefore, health care providers and patients should have explicit dialogues about how to effectively integrate CAM practices into traditional treatment regimens; so that the safety and health of HIV-positive patients is not compromised

Keywords: HIV/AIDS, Complementary Alternative Medicine (CAM), Management.

INTRODUCTION

As we know HIV/AIDS is a spectrum of conditions caused by infection with HIV [1] [2] [3]. Following initial infection, a person may be asymptomatic or may experience a brief period of influenza-like illness [4], and this is followed by a prolonged period with no symptoms. [5] As the infection progresses, it interferes more with the immune system, increasing the risk of common infections like tuberculosis, opportunistic infections and tumors that rarely affect people who have working immune systems. [4] These late symptoms of infection are referred to as acquired immunodeficiency syndrome (AIDS). [5] This stage is often also associated with weight loss. [6]

HIV is spread primarily by unprotected sex (including anal and oral sex), contaminated blood transfusions, hypodermic needles and from mother to child during pregnancy, delivery, or breast feeding. [6] It is to be mentioned that there is no risk of acquiring HIV if exposed to feces, nasal secretions, saliva, sputum, sweat, tears, urine, or vomit unless these are contaminated with blood. [7] HIV infection can only be diagnosed by PCR testing for HIV RNA or DNA, or via testing for the p24 antigen. [8] Much of the world lacks access to reliable PCR testing and many places simply wait until either symptoms

develop or the child is old enough for accurate antibody testing. [9] Methods of prevention include safe sex, needle exchange programs, treating those who are infected, and male circumcision [4]. Disease in a baby can often be prevented by giving both the mother and child antiretroviral medication. [4] There is no cure or vaccine; however, antiretroviral treatment can slow the course of the disease and may lead to a near-normal life expectancy. [5] [10] Treatment is recommended as soon as the diagnosis is made. [11] Without treatment, the average survival time after infection is 11 years. [12]

Current options of treatment are combinations of at least 3 medications belonging to at least 2 types, or "classes," of antiretroviral agents. [13] Initially treatment is typically a non-nucleoside reverse transcriptase inhibitor (NNRTI) plus 2 nucleoside analog reverse transcriptase inhibitors (NRTIs). [14] Typical NRTIs include: zidovudine (AZT) or tenofovir (TDF) and lamivudine (3TC) or emtricitabine (FTC). [14] Combinations of agents which include protease inhibitors (PI) are used if the above regimen loses effectiveness. [13]

The World Health Organization and United States recommends antiretrovirals in people of all ages including pregnant women as soon as the diagnosis is made regardless of CD4

count.[11][15][16] Once treatment is begun ; it is recommended that it is continued without breaks or "holidays".[17] Many people are diagnosed only after treatment ideally should have begun.[17] The desired outcome of treatment is a long term plasma HIV-RNA count below 50 copies/mL.[17] Levels to determine if treatment is effective are initially recommended after four weeks and once levels fall below 50 copies/mL checks every three to six months are typically adequate.[17] Inadequate control is deemed to be greater than 400 copies/mL.[17] Based on these criteria treatment is effective in more than 95% of people during the first year.[17]

Measures to prevent opportunistic infections are effective in many people with HIV/AIDS. In addition to improving current disease, treatment with antiretrovirals reduces the risk of developing additional opportunistic infections.[18] Adults and adolescents who are living with HIV (even on anti-retroviral therapy) with no evidence of active tuberculosis in settings with high tuberculosis burden should receive isoniazid preventive therapy (IPT), the tuberculin skin test can be used to help decide if IPT is needed.[19] Vaccination against hepatitis A and B is advised for all people at risk of HIV before they become infected; however it may also be given after infection.[20] Trimethoprim/sulfamethoxazole prophylaxis between four and six weeks of age and ceasing breastfeeding in infants born to HIV positive mothers; is recommended in resource limited settings.[21] People with substantial immunosuppression are also advised to receive prophylactic therapy for toxoplasmosis.[22] Influenza vaccination and pneumococcal polysaccharide vaccine are often recommended in people with HIV/AIDS with some evidence of benefit.[23][24]

The World Health Organization (WHO) has issued recommendations regarding nutrient requirements in HIV/AIDS.[25] Higher intake of vitamin A, zinc, and iron can produce adverse effects in HIV positive adults, and is not recommended unless there is documented deficiency.[25][26] Dietary supplementation for people who are infected with HIV and who have inadequate nutrition or dietary deficiencies may strengthen their immune systems or help them recover from infections, however evidence indicating an overall benefit in morbidity or reduction in mortality is not consistent.[27]

Evidence for supplementation with selenium is mixed with some tentative evidence of

benefit.[28] For pregnant and lactating women with HIV, multivitamin supplement improves outcomes for both mothers and children.[29] If the pregnant or lactating mother has been advised to take anti-retroviral medication to prevent mother-to-child HIV transmission, multivitamin supplements should not replace these treatments.[29] There is some evidence that vitamin A supplementation in children with an HIV infection reduces mortality and improves growth.[30]

In 2016 about 36.7 million people were living with HIV and it resulted in 1 million deaths.^[31] Most of those infected were detected in sub-Saharan Africa.^[4] Between the discovery of this disease and the year 2014 ; AIDS has caused about 39 million deaths worldwide.^[32] HIV/AIDS is considered a pandemic.^[33] HIV is believed to have originated in west-central Africa during the late 19th or early 20th century.^[34] AIDS was first recognized by the United States Centers for Disease Control and Prevention (CDC) in 1981 and its cause(HIV) was identified in the early part of the decade.^[35]

HIV/AIDS has had a great impact on society, both as an illness and as a source of discrimination.^[36] It also has large economic impacts.^[36] There are many misconceptions about HIV/AIDS such as the belief that it can be transmitted by casual non-sexual contact.^[37]

The role of Complementary or Alternative Medicine (CAM) in HIV management is not yet clear; although in the US, approximately 60% of people with HIV use various forms of complementary or alternative medicine,[38] even though the effectiveness of most of these therapies has not been established.[39] There is not enough evidence to support the use of herbal medicines.[40] There is insufficient evidence to recommend or support the use of medical cannabis to try to increase appetite or weight gain.[41] To strengthen the overall health, the patients have to maintain a healthy diet, exercise regularly and get enough sleep. Although it is important to receive medical treatment for HIV/AIDS, patients may use home remedies or alternative medicine along with standard HIV treatment to improve overall health. It is to be mentioned that discussing the use of CAM treatment with the treating physician ; is very important before trying alternative therapies ; as some can interfere with the effectiveness of or cause negative effects with HIV drugs.[42] Patients with HIV infection use CAM, including marijuana, at a high rate; making frequent visits

to CAM providers; incur substantial expenditures; and report considerable improvement with these treatments. However, clinical trials of frequently used CAMs are needed to inform physicians and patients about therapies that may have measurable benefit or measurable risk. [42]

The use of complementary or alternative medicine (CAM) may be substantially more prevalent among patients with human immunodeficiency virus (HIV) than among the general population.[43] A small study of 2 groups of HIV-infected patients in northern California from 1988 to 1990 found that 70% had used CAM at some point. According to results from a Boston, Mass, survey, Cohen et al. [44] reported in 1990 that 73% of patients used CAM. This study showed that those patients with higher education levels and lower helper T cells were more likely to use CAM. These studies were performed before the availability of protease inhibitors, which may have affected CAM use. In addition, few data are available on the specific therapeutic goals or symptoms that patients with HIV may attempt to treat with CAM, their associated outcomes, and expenditures for CAM by HIV-infected patients. Patients reported substantial benefit from the use of CAM, whether they used it alone or in combination with conventional treatment. A high prevalence of CAM use among patients with HIV, with high yearly visit rates and expenditures. Patients involved in conventional care; use CAM to complement conventional therapies for specific symptoms or problems rather than to the exclusion of conventional care. In general, perceived efficacy of CAM is high. [44]

Earlier studies in Boston [44] and California [43] of HIV-infected patients showing high rates for using CAM. These findings differ from those of Greenblatt et al [45] and Anderson et al, [46]; who found that only 29% to 40% of patients attending conventional medical care sites were also using CAM. These studies may have underestimated CAM use because they referred to therapies as "unorthodox" or "alternative" or because they only assessed therapies taken by mouth. [47]Because they collected their data after protease inhibitors became widely available, it seems that the availability of efficacious antiviral drugs has not diminished CAM use. Others have reported comparably high rates of CAM use in patients with long-term disease other than HIV infection, including cancer [48], [49] and arthritis. , [50]

Findings suggest that HIV-infected patients, like those with other long-term illness, may use CAM to a much greater degree than the general population.

Patients with HIV seem to use CAM for a variety of reasons, most importantly to relieve pain or neuropathy, to relieve stress or depression, to fight other infections, and to treat weight loss and nausea. However, Owen –Smith [51] studied that the relationship between CAM use and HAART adherence among HIV+ women. The findings provide preliminary evidence that patients using CAM may be doing so as an alternative to traditional medicine as opposed to complementing prescribed HAART treatment regimens. The inconsistent use of HAART is problematic given its association with drug resistance. Therefore, health care providers and patients should have explicit dialogues about how to effectively integrate CAM practices into traditional treatment regimens; so that the safety and health of HIV-positive patients is not compromised. Nearly all Canadian patients used CAM in conjunction with antiretroviral medications. [52] Palmer [53] reported that although the introduction of highly active antiretroviral therapy has prolonged life and increased the quality of life for those with HIV/AIDS, they continue to experience physical and emotional consequences of the infection and its treatments—leading them to seek relief through the use of CAM. The use of CAM is prevalent among HIV-positive women, and vitamins are the most commonly used CAM among our study population. Several sociodemographic and clinical factors predicted CAM use. These findings have implications for improvement of care for HIV-positive women. [54]Some herbs were used in Africa for relief of side effects of AIDS` drugs; Calendula , aloe , basil, cardamone, chamomile, cinnamon, cloves, eucalyptus, fennel, garlic, ginger , lemon, lemon grass, mint , neem , barsley, thyme, peppermint and turmeric. [55]

CONCLUSION

- Patients involved in conventional care; use CAM to complement conventional therapies for specific symptoms or problems rather than to the exclusion of conventional care.
- Patients with HIV seem to use CAM for a variety of reasons, most importantly to relieve pain or neuropathy, to relieve stress or depression, to fight other infections, and to treat weight loss and nausea.

- Clinicians are often queried about CAM and have limited information to offer patients. Until more information is available from randomized trials, perceived efficacy of therapies may be a useful way to guide patients toward therapies that seem to provide relief from refractory symptoms.
- Research funds should be directed toward conducting outcomes research and randomized controlled trials of specific therapies in those patient subgroups who seem to derive the most benefit.

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