Infertility treatment for HIV-positive women

Augusto Enrico Semprini[1†], Lital Hannah Hollander[1,2], Alessandra Vucetich[1,3] & Carole Gilling-Smith[4]

†Author for correspondence
[1]ESMAN Medical Consulting, Via Carlo Crivelli, 20 20122 Milano, Italy
Tel.: +39 025 843 0703;
Fax: +39 025 830 4466;
E-mail: semprini@esman.it
[2]Tel.: Phone;
Fax: Fax;
E-mail: Email
[3]Tel.: Phone;
Fax: Fax;
E-mail: Email
[4]Chelsea & Westminster Hospital, Assisted Conception Unit, London SW10 9NH, UK
Tel.: Phone;
Fax: Fax;
E-mail: Email

Thanks to antiretroviral combination therapy, HIV-infected individuals live longer, healthier lives and may wish to have children. Women with HIV can attempt to conceive naturally or through simple self-insemination to minimize the risk of horizontal HIV transmission. Assisted reproduction technology is necessary in couples with infertility, which can either be independent of HIV infection and its treatment or be associated with it. This article summarizes the latest evidence regarding the desire for a child in HIV-positive women and how HIV infection and its treatment may impact female fertility. Current data regarding access to and outcomes of assisted conception programs in HIV-positive women wishing to conceive in both high and low income countries is also reviewed.

Keywords: HIV, horizontal transmission, infertility, self-insemination, seropositive women, vertical transmission

future medicine part of fsg

Nearly half of the 37.2 million adults living with HIV/AIDS worldwide are women, and most of them are of child-bearing age [101,1]. Globally, the number of HIV-infected women is progressively on the rise as a result of increasing rates of HIV sexual transmission to women [2,3], which, in industrialized countries, is accompanied by the decrease in mortality owing to effective antiretroviral treatments [4,5]. HIV infection has considerable impact on the lives of women, as they are more vulnerable to infection both socially and biologically. The predominant mode of transmission in most parts of the world is through heterosexual contact, with peaks of incidence through intravenous drug use in certain areas – mainly Eastern Europe.

HIV infection interferes with sexual and reproductive choices in a variety of ways, including concerns regarding sexual transmission to the uninfected man, vertical transmission to the child and fears regarding declining health and shortened life span. In addition, HIV has been shown to impair fertility for a number of reasons, including the effect of advanced HIV disease, interaction with antiretroviral medication and a higher frequency and severity of genital tract infections [6]. As far as fertility is concerned, HIV infection in women is also characterized by unique gynecologic manifestations, such as cervical dysplasia or severe pelvic inflammatory disease, which may impact fertility or complicate the course of pregnancy.

Where available, the introduction of highly active antiretroviral therapy (HAART) into clinical practice has gradually transformed HIV infection from a progressively fatal disease to a chronically manageable infection in substantially asymptomatic individuals. The ability, offered by HAART, to reach undetectable maternal viral loads during pregnancy, together with the choice of elective cesarean section in selected cases of pregnant women and the restriction of breast feeding, has the reduced rates of mother-to-child transmission to negligible levels [7,8].

However, women infected with HIV live in very diverse life conditions and infection settings, which condition the access to HIV treatment and reproductive health services. Effective antiretroviral medication is still widely unavailable for residents in low-income countries. Migrants and refugees from low-to-high income countries, although in theory able to enjoy the advantages of advanced HIV medication and reproductive health services, may be living in conditions that are rather similar to those of women living in low-income countries. Factors including cultural barriers, legal status and trauma may further condition these women in making choices regarding their future and the future of their families [9]. Finally, types and prevalence of infertility factors differ among populations such as sexually transmitted diseases (STDs) and/or pelvic inflammatory disease (PID), may be more frequent in women injecting drugs and in several developing countries. This ample diversity should be kept in mind when considering the issue of reproduction in HIV-positive women.

In the reassuring context thus created in many developed countries, women infected with HIV may feel more legitimized in their desire to have a child. Health authorities and