Sexually Transmitted Diseases and Sexual Function

Hossein Sadeghi-Nejad, MD,* Marlene Wasserman, BA, MA, DHS,† Wolfgang Weidner, MD,‡ Daniel Richardson, BSc, MRCP,§ and David Goldmeier, MD¶

*UMD New Jersey Medical School, Newark and Hackensack University Medical Center, Hackensack, NJ, USA; †Sexual Health Center, Cape Town, South Africa; ‡University of Giessen, Urology, Pediatric Urology and Andrology, Giessen, Germany; §Royal Sussex County Hospital, and Genitourinary Medicine, Brighton, UK; ¶Imperial College NHS Trust at St Mary's Hospital, London, UK

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ABSTRACT

Introduction. There is a need for state-of-the-art information in the area of sexually transmitted infections (STIs) in relation to sexual function. There are an estimated 60 million people living with and 340 million with treatable STIs. Surveys show sexual problems to be as high as 35% for men and 55% for women; however, there is little research directly assessing relationships between infection and sexual function.

Aim. To show that STIs are associated with (and may cause) sexual dysfunction. Conversely, sexual dysfunction can increase patients' risk of STI acquisition. In men, erectile dysfunction (ED) associated with condom use may lead to unsafe sexual practices and, hence, STI acquisition. The role of various therapies including phosphodiesterase type 5 inhibitors in the treatment of ED in positive men taking social drugs will be explored.

Methods. To provide state-of-the-art knowledge concerning sexual function and STIs, representing the opinions of five experts from four countries developed in a consensus process and encompassing a detailed literature review over a 2-year period.

Main Outcome Measure. Expert opinion was based on the grading of evidence-based medical literature, widespread internal committee discussion, public presentation, and debate.

Results. This article highlights major factors causing the spread of STIs and suggests management interventions to prevent further spread of HIV/STIs, focusing on the juxtaposition between STIs and sexual functioning. Women's unique vulnerabilities to HIV/STIs (biological and physiological issues, gender-based violence, gender inequity) and their impact on women's sexual function are reviewed. Similarly, men's unique vulnerabilities to HIV/STIs including condom use, disclosure, voluntary counseling and testing, multiple concurrent sexual partners, and recreational drug use—particularly in homosexual men—are explored, as is the association of prostatitis and sexual function. Lastly, the article reviews the relationship between circumcision and sexual dysfunction.

Conclusions. A multidimensional approach to achieve optimal treatment outcomes should be embraced. **Sadeghi-Nejad H, Wasserman M, Weidner W, Richardson D, and Goldmeier D. Sexually transmitted diseases and sexual function. J Sex Med 2010;7:389–413.**

Key Words. Sexually Transmitted Disease; Sexual Dysfunction; Treatment

Introduction

It is a reasonable assumption that people who contract sexually transmitted infections (STIs) do not have sexual dysfunction and that those who are dysfunctional would not have the capacity to develop STIs. In this review, we have put forward what we believe is a raft of compelling scientific evidence showing that these realms do, in fact, interact, often in causative fashion. Because sexual dysfunction symptoms may be found in up to half of nonbiased population studies and the rates of STIs are measured in tens of millions, these issues potentially affect a sizeable proportion of sexually active men and women in most countries. To date, a systematic and broad review of the interaction of these two major themes has not been undertaken, but with the spread of HIV and other STIs

worldwide, it is a timely mission that we have been asked to tackle. Although much of the material in this chapter has high-grade references, the evidence base levels are low in some instances. This is due to the newness of the topic, a fact that positively opens many future possibilities for future research and improved evidence-based levels.

Overview of HIV and HIV in Men

Effects of HIV Itself

Introduction

HIV that is left untreated severely impairs the immune system by infecting CD4 lymphocytes. Groups that are most affected in North America, Western Europe, and Australia are men who have sex with men (MSM), and intravenous drug users. In the developing world, heterosexual sexual intercourse and vertical (mother to child) remain the primary routes of transmission (http://www.unaids.org/en/Knowledgecentre/hivdata/Epidemiology/epipublications.asp).

Since the advent of effective HIV treatment (highly active antiretroviral therapy [HAART]) in the mid-1990s, rates of STIs and HIV acquisition have continued to increase in the developed countries (http://www.hpa.org.uk/) [1]. In developing countries, the incidence of HIV remains explosive, and, without effective treatment, the outlook seems devastating (http://www.unaids.org/en/Knowledgecentre/hivdata/Epidemiology/epipublications.asp).

HAART generally produces a sustainable suppression of plasma HIV virus (viral load) and an increase in circulating CD4 cells. More than 25 antiretroviral drugs from six therapeutic classes are now available for the management of HIV infection and mortality in HIV-infected patients now approaches that of the uninfected population [2].

Sexual difficulties appear to be common in patients with HIV. They were reported by 33.3% of individuals with HIV in a recent French national survey [3] and MSM in the United Kingdom are five times more likely to report sexual problems than uninfected MSM [4]. Furthermore, patients on HAART with sexual difficulties are more likely to report poor adherence to HAART [5].

HIV Encephalopathy (HIVE)

HIVE is the infection of the central nervous system (CNS) directly caused by HIV. If untreated, some 15–20% of patients will eventually develop the disease [6]. HIVE generally only occurs in the later stages of the HIV infection when there is a profound immune suppression (CD4+ T-cells <200/μL) [7] (http://hivmedicine.com/hivmedicine2007.pdf).

HIVE is a subcortical dementia which emerges over the course of weeks and months. Typical complaints include slowing of reasoning and emotional blunting which could, in theory, underpin sexual disinhibition [6,8,9].

There are no systematic reviews of sexual functioning of HIVE patients. Anecdotal reports by the authors had clinical pictures of low sexual desire, erectile dysfunction (ED) and sexual disinhibition. HIVE and other CNS manifestations are less likely in individuals on HAART and are more likely to improve on HAART [10,11].

Adjustment Disorders, Depression, and Anxiety in HIV

At the beginning of the AIDS pandemic, affective disorders (such as depressed mood) were seen in a considerable number of HIV-1-infected individuals [12]. In the era of HAART, mental illness related to physical weakness is declining [13].

A survey of patients in the United States found that 54% of HIV patients had Axis I psychiatric disorders, including 20% with major depression and 18% with depressive symptoms associated with adjustment disorder [14].

Patients with mild adjustment disorders resulting from bad news (i.e., giving the patient an HIV diagnosis or the worsening of HIV disease status) and patients with major depression may benefit from supportive psychotherapy [15].

Anxiety and depression are common among persons living with HIV, with a prevalence of nearly 50% in a U.S. screening sample of 2,864 HIV-infected persons [16]. It is not known whether the introduction of HAART has led to a decline in depression and anxiety disorders among HIV-infected persons. However, minor cognitive motor disorders have significantly declined in the HAART era [9,17–22].

The presence of depression and anxiety has been shown to be an important patient-related barrier to adequate adherence to HAART [23,24]. Despite the consistent association between depression and HAART adherence behavior, there have been few detailed analyses of this issue. It is also possible that HIV-associated neurocognitive disturbances, which become more prominent as HIV disease advances, might be responsible for nonadherence. However, to our knowledge, the relationship between adherence to HAART and