Significant Challenges Facing HIV Practitioners

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The care of patients with HIV infection has become possibly the most rewarding and yet most challenging specialty in medicine. The advances over the past 10–15 years have been extraordinary and probably are unrivaled by those for the treatment of any other contemporary disease. However, treatment-related decisions are complex, and the penalties for mistakes are harsh. There are now 24 antiretroviral drugs, with 2 new agents introduced in 2007. PubMed lists >6000 articles about HIV treatment that have been published within the past year. It is becoming impossible to keep up.

This supplement to the Journal of Infectious Diseases discusses 5 areas that are central to HIV care and that are characterized by especially challenging issues. Authoritative reviews are provided regarding the management of initial therapy, failed therapy, adherence issues, hepatic coinfection, and neurological complications. Martin S. Hirsch [1] reviews the latest information about when to start antiretroviral therapy (ART) during chronic infection, as well as the drugs to use and whether to start therapy during primary infection and what to use in the initial regimen. He also addresses the value of new and investigational therapies for treatment-naive patients.

Joseph J. Eron [2] examines issues related to treatment-experienced patients, such as when to change therapy, what to change to, the use of resistance testing, and when to use or await new agents. Eron also presents the mounting evidence against the use of structured treatment interruptions, primarily on the basis of the results of the Strategies for Management of Antiretroviral Therapy study [3, 4].

The most common cause of viral rebound is suboptimal adherence to ART. David R. Bangsberg [5] summarizes his work showing the distinctive differences in virologic and resistance outcomes based on patterns of adherence to nonnucleoside reverse-transcriptase inhibitor (NNRTI), protease inhibitor (PI), and boosted-PI regimens. He also addresses methods for the detection of declining adherence before viral rebound and in time to prevent HIV resistance. Of particular importance is understanding that the commonly quoted “95% rule” [6] is correct only for unboosted PIs with a short half-life, such as nelfinavir. Specifically, adherence demands are much less restrictive with NNRTI and boosted-PI regimens [7].

With the advent of increasingly effective ART, liver disease due to chronic hepatitis B virus (HBV) and/or hepatitis C virus (HCV) infection has become the second most common cause of death among persons with HIV infection [8]. The management of HIV infection in persons with chronic HBV infection is complicated by the effect of HIV infection in accelerating the progression of HBV infection–induced liver disease and by the complex issue of using nucleosides that have activity against one or both viruses [9]. The issues regarding HCV coinfection are different, but HCV coinfection is more common and equally complex. Mark S. Sulkowski [10] discusses the detection and evaluation of patients with coinfection and how coinfection affects the management of both HBV and HCV infection. An obvious concern is liver injury attributed to ART itself. The current consensus is that ART usually is safe for HIV-infected patients and possibly is beneficial to the liver [11, 12]. The major issues regarding coinfection are the management of hepatotoxicity and of HCV or HBV infection, on which HIV coinfection has a notable impact.

Richard W. Price and Serena Spudich [13] review issues relating to the epidemiology and management of central nervous system (CNS) opportunistic disease. In the developed world, the incidence of this complication and of AIDS dementia complex (ADC) in HIV infection has fallen dramatically with the advent of widespread, effective ART [14]. Nevertheless, CNS opportunistic infection and ADC still occur, especially in individuals whose disease has advanced because they have not accessed care or have experienced treatment failure. Included in the discussion is a review of the management of patients with ADC, immunologic and inflammatory markers of CNS HIV-1 infection, the impact of chronic asymptomatic
CNS HIV-1 infection, the CNS adverse effects of ART, and other puzzling, clinically important issues.

Advances in HIV care have improved the projected median survival time for HIV-infected persons, from 3–4 years in 1996 to 40 years for those who received a diagnosis in 2006 [15]. Current treatments are complex and lifelong and cost $15,000–$20,000/year. It is important to get it right and to be aware of the constant changes in the field.

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References