Current Report – HIV

The New AIDS Surveillance Case Definition

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On 1 January 1993, the Centers for Disease Control and Prevention (CDC) expanded its AIDS Surveillance Case Definition for adults and adolescents to include any of the following conditions: pulmonary tuberculosis, recurrent pneumonia, invasive cervical cancer, and a CD4+ lymphocyte count of fewer than 200 cells/μL or 14 percent of the total lymphocyte count.[1] The purposes of the new case definition are to increase acquired immunodeficiency syndrome (AIDS) reporting to the CDC, to include these additional conditions that usually occur as serious complications of human immunodeficiency virus (HIV) disease, and to estimate more accurately the number of persons with advanced HIV disease. Almost one-half of the 85,000 to 90,000 new AIDS cases expected to be reported in 1993 will result from the expanded case definition.

Pulmonary Tuberculosis, Recurrent Pneumonia, and Invasive Cervical Carcinoma

Earlier AIDS case definitions[2,3] did not include pulmonary tuberculosis, recurrent pneumonia, or invasive cervical carcinoma. Although these conditions can occur at any time in the course of HIV disease, they most often occur with advanced immunodeficiency and are now classified as AIDS-indicator diseases. Pulmonary tuberculosis can occur as an early or late manifestation of HIV disease. Coinfection with both HIV and *Mycobacterium tuberculosis* has emerged as a critical public health problem, and both pulmonary and extrapulmonary tuberculosis are serious complications of AIDS. Recurrent pneumonia is defined as more than one documented episode in a 1-year period. Rapidly advancing invasive cervical cancer has been observed in some HIV-infected women and is included in part to heighten health care providers' awareness that cervical neoplasia can be the only clinical indication that a woman is HIV-infected. The revised AIDS-defining identifier conditions are listed in Table 1.

CD4+ Lymphocyte Counts and Percentages

The CD4+ (T-helper) lymphocyte count has become the standard laboratory marker of HIV disease progression.[4] Most severe HIV illnesses occur when the CD4+ count is fewer than 200 cells/μL. Life-threatening complications frequently occur with CD4+ cell counts fewer than 100 cells/μL although some patients live for years with these low CD4+ cell counts. The so-called normal CD4+ cell count range is wide. Variability from person to person and marked fluctuations from day to day for the individual patient are common,[5] as most HIV-infected patients and their providers learn. Laboratory standardization, consistency, and accuracy of CD4+ cell count innumeration has not been achieved in the United States, but efforts are under way to rectify these problems.[5] Nonetheless, the new AIDS Surveillance Case Definition permits a single CD4+ cell count of fewer than 200 cells/μL or CD4+ percentage of less than 14 percent to be sufficient to define AIDS. Consequently, some patients without advanced disease but experiencing transient decreases in CD4+ cell counts and patients whose CD4+ cell measurement is subject to a laboratory error will inevitably be given the AIDS diagnosis.

Implications for Primary Care

Although the new AIDS Surveillance Case Definition includes some important new identifier conditions and will increase HIV and AIDS reporting, it will also create problems for some patients, families, and their health care providers.

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Table 1. Identifier Diseases for AIDS Surveillance Case Definition.*

Candidiasis of bronchi, trachea, or lungs
Candidiasis, esophageal
Cervical cancer, invasive
Coccidioidomycosis, disseminated or extrapulmonary
Cryptococcosis, extrapulmonary
Cryptosporidiosis, chronic intestinal (> 1 month duration)
Cytomegalovirus disease (other than liver, spleen, or nodes)
Cytomegalovirus retinitis
HIV encephalopathy
Herpes simplex: chronic ulcer (> 1 month duration); or bronchitis, pneumonitis, or esophagitis
Histoplasmosis, disseminated or extrapulmonary
Isosporiasis, chronic intestinal (> 1 month duration)
Kaposi's sarcoma
Lymphoma, Burkitt's
Lymphoma, immunoblastic
Lymphoma, primary in brain
Mycobacterium-avium intracellularae complex or *M. kansasii* infection, disseminated or extrapulmonary
Mycobacterium tuberculosis infection, any site (pulmonary or extrapulmonary)
Mycobacterial disease, other species or unidentified species, disseminated or extrapulmonary
Pneumocystis carinii pneumonia
Pneumonia, recurrent
Progressive multifocal leukoencephalopathy
Salmonella septicemia, recurrent
Toxoplasmosis of brain
Wasting syndrome due to HIV

*Adapted from Centers for Disease Control.[1]

While the strategy of defining AIDS on the basis of only one low CD4+ lymphocyte threshold might be economically wise and appropriate for surveillance purposes, it will result in some patients without advanced HIV disease having to carry the AIDS label. Family physicians and other primary care providers will need to be alert to the negative effects the new label might have. Depression, fear, agitation, and other psychological problems will be inevitable reactions for many patients. Stigmatization and other social effects could be considerable. Some patients, fearing a low CD4+ measurement (and an AIDS diagnosis), might be reluctant to undergo CD4+ cell count testing or to receive regular health care. Confidentiality of CD4+ reports is supposed to be protected to the same degree as HIV test results (in most states) but will be difficult to maintain. Patients and physicians will need to know to whom CD4+ test results will be reported.

The physician must evaluate the patient's health from all perspectives — symptoms, signs, and laboratory findings — to develop an overall clinical assessment. Although a single low CD4+ cell count can now define AIDS, only repeated CD4+ cell measurements to determine overall CD4+ trends will establish their relevance to the patient's clinical state. The course of HIV disease is neither linear nor always in the same direction. Educating patients about the slow and variable course of HIV disease, addressing medical and social concerns, developing treatment plans, discussing fears and concerns, and fostering optimal relationships with the primary provider and the health care team remain paramount.

For better and for worse the case definition is changed. More complete reporting of the extent of severe HIV disease will result. The new case definition appropriately adds some conditions to the AIDS-defining category and will increase awareness of the public health problems of HIV and tuberculosis. However, thousands of persons will be newly labeled as AIDS patients and will experience negative psychological and social impact. In addition, categorizing a patient's health, prognosis, and need for intervention based on only one CD4+ cell count is not clinically wise. It will again be left to family physicians and other primary care providers to put this new information in a context that serves the patient and family best.

References

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