2001

HEPP News, Vol. 4 No. 5

HIV & Hepatitis Education Prison Project

HEPP NEWS
HIV & HEPATITIS EDUCATION PRISON PROJECT
May 2001 Vol. 4, Issue 5
Sponsored by the Brown Medical School Office of Continuing Medical Education and the Brown University AIDS Program.

ABOUT HEPP

HEPP News, a forum for correctional problem solving, targets correctional administrators and HIV/AIDS and hepatitis care providers including physicians, nurses, outreach workers, and case managers. Published monthly and distributed by fax, HEPP News provides up-to-the-moment information on HIV and hepatitis treatment, efficient approaches to administering treatment in the correctional environment, national and international news related to HIV and hepatitis in prisons and jails, and changes in correctional care that impact. Continuing Medical Education credits are provided by the Brown University Office of Continuing Medical Education to physicians who accurately respond to the questions on the last page of the newsletter.

Faculty Disclosure

In accordance with the Accreditation Council for Continuing Medical Education Standards for Commercial Support, the faculty for this activity have been asked to complete Conflict of Interest Disclosure forms. Disclosures are listed at the end of articles. All of the individual medications discussed in this newsletter are approved for treatment of HIV and hepatitis unless otherwise indicated. For the treatment of HIV and hepatitis infection, many physicians opt to use combination antiretroviral therapy which is not addressed by the FDA.

HEPP News is grateful for the support of the following companies through unrestricted educational grants:
Major Support: Agouron Pharmaceuticals and Dupont Pharmaceuticals
Sustaining: Abbott Laboratories, Boehringer-Ingelheim/ Roxane Laboratories, Merck & Co., and Roche Pharmaceuticals
Supporting: OrthoBiotech

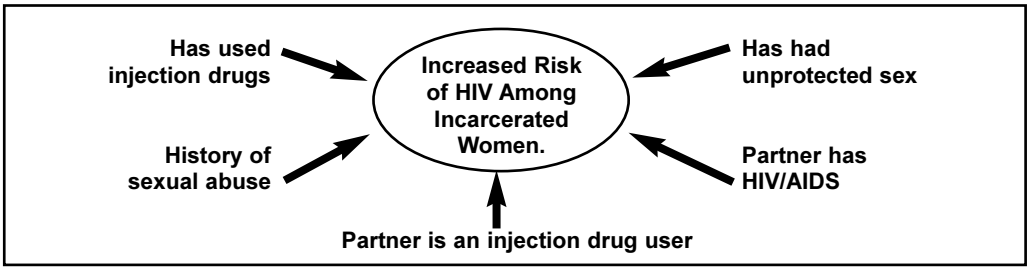
HIV Infection Among Incarcerated Women

Michelle Onorato, M.D.*, *University of Texas Medical Branch at Galveston*

HIV infection among incarcerated women has become a hidden epidemic in the United States. Factors that contribute to this epidemic include an increase of over 500% in the absolute number of women incarcerated in 1999 compared to 1980, and a higher seroprevalence of HIV in incarcerated women compared to US women in general (3.5% vs. 0.1%, See Figure 1).[1] Together, these factors have led to a steady increase in incarcerated women with HIV infection, compared to a plateau in the number of HIV positive male offenders over the past five years.

HIV infection has affected women of color disproportionately in the US as a whole, and the overrepresentation of women of color among incarcerated women magnifies the impact of HIV infection in prisons. In the year 2000, in Texas (which ranks second only to California for the number of women incarcerated), 22.8% of HIV positive incarcerated women were White, 72.4% were Black, and 4.8% were Hispanic.[2]

Figure 1. Factors contributing to increased risk of HIV among incarcerated women that should trigger HIV screening, treatment and prevention education.



Numerous studies have shown that the same behaviors that lead to incarceration put women at increased risk for HIV infection.[23,24,25] Links between drug use, sex work, victimization, poverty, race and HIV explain the prevalence of HIV infected women behind prison walls.

The dramatic increase in the number of HIV infected women who are incarcerated means that more and more correctional healthcare providers will be faced with the challenges of caring for these women, and will need to know the gender specific medical issues involved in providing care for women with HIV. In addition, there are complex psychosocial issues such as depression, substance abuse, and prior physical and sexual abuse that impact this population more frequently than their HIV infected, non-incarcerated counterparts (See Spotlight).[3, 4, 5] These co-morbidities may interfere with their ability to cope with a stigmatized, chronic illness that requires adherence to a complex medical regimen for successful treatment.

HIV Testing in the Correctional Setting

Many of the issues regarding HIV testing for women have been addressed previously in this newsletter (HEPP News April 2000, June 1999). However, given the high prevalence not only of HIV infection, but also high risk behaviors in incarcerated women, HIV risk education is perhaps the most important part of HIV pre and post-test counseling.

Education regarding safer sexual practices and other risk reduction is an essential part of pre-test counseling because this is when such counseling can have a real impact. This information can (and should) be repeated at post-test counseling, since a women testing negative may erroneously conclude that her behaviors are not so risky after all. Two other critical components of post-test education should include discussion of the benefits of early diagnosis and education regarding repeated testing, especially if potential exposure continues.

Continued on page 2

WHAT'S INSIDE

HIV Infection...

(continued from page 1)

The personnel providing pre and post-test counseling must realize that for many women, access and opportunity for health-care outside the prison walls are limited by multiple psychosocial and logistical obstacles. Incarceration is a unique opportunity for education and empowerment of these women regarding health promotion, disease prevention, and disease process. However, incarceration does create real concerns about loss of confidentiality and fear of stigma that can prevent women from presenting for voluntary testing while in custody. HIV testing and education should be offered more than once during incarceration, especially to women with the following conditions: pregnancy, diagnosis of prior or current sexually transmitted disease, diagnosis of cervical neoplasm or dysplasia, diagnosis of Hepatitis B or C, history of commercial sex work, history of sexual abuse, or history of drug use.

Treatment of HIV-Infected Women

The initial medical evaluation of an HIV infected woman should include a thorough past medical history, social history, and review of systems as outlined in Table I. Given the high rate of STDs and cervical neoplasia in HIV infected women, physical examination beyond the standard exam should include pelvic exam with Pap smear and STD screening (See HIV 101 page 7 and HEPP News, April 2000). Laboratory evaluation should include screening for other blood borne infections (Hepatitis B and C), TB exposure (PPD), and baseline hematology and chemistries, including liver panel (both for baseline prior to beginning therapy, and to screen for other co-morbid conditions), as well as CD4 counts and HIV viral load.

By far, the most important part of the initial encounter with an HIV positive woman is identifying potential obstacles to adherence with treatment and return to clinic. Before choosing a specific regimen, clinicians should assess the patient's knowledge about HIV infection and treatment options, and discuss therapeutic agents, possible side effects, timing of medications, and the importance of adherence once therapy is initiated. A critical component of continuing care is linking the patient with care providers to access once she is released.

Current Recommendations for Initiating Antiretroviral Therapy

In February 2001, the Panel on Clinical Practices for Treatment of HIV Infection convened by the Department of Health and Human Services (HHS) revised its guidelines for the use of antiretroviral agents in adults (see HEPP News, February 2001).[6] The most recent change in the HHS guidelines are the recommendations regarding initiation of therapy in the asymptomatic HIV-infected patient, which were summarized in the February 2001 issue of HEPP News. (It must be noted that these recommendations apply only to chronically infected patient, not to patients with acute HIV infection). The recommendation to wait for a CD4 count of <350 or a viral load of >50,000 by PCR –i.e., more advanced infection– is in reaction to the greater appreciation of the adverse metabolic effects of long term antiretroviral therapy. Adverse effects can be seen with all the classes of agents currently available, and for most people with HIV infection, therapy will be continued lifelong. Thus, the new HHS guidelines recommend delaying initiation of therapy until the risk of disease progression justifies the risk of antiretroviral therapy. However, there is reason to believe these guidelines will be modified again this year due to new information on gender differences in viral loads.

Table I. Pertinent Elements of History in Initial Encounter of HIV Infected Women

Past Medical History	Identify Comorbid Conditions that may complicate care of HIV infection (i.e., Hepatitis B or C, Diabetes, Post-Traumatic Stress Disorder, depression, low self-esteem, or anxiety disorders, etc)
Past Medication Use and Allergies	Initial screen for prior antiretroviral exposure and possible toxicities or resistance; possible drug interactions with antiretrovirals or other indicated medications; specifically identify alternative medicine use (pt may not volunteer this information).
Social History	Identify high-risk behaviors, so pt can be counseled re: prevention of infection with more virulent or resistant strain of HIV. Identify potential obstacles to medical therapy such as illiteracy, substance abuse/addiction, sexual abuse, partner uses injection drugs or is HIV-infected and psychiatric illness.
Review of Systems	Should include specific questions regarding menstrual history, symptoms of gynecologic infection or malignancy, symptoms of depression or anxiety, as well as screening for symptoms of underlying opportunistic illness.

Initiating Antiretroviral Therapy in Women

The HHS guidelines rely heavily on HIV-1 viral load as a predictor of disease progression; and much of the data linking viral load to development of AIDS comes from longitudinal studies of male populations, such as the MACS cohort.[7, 8] However, multiple studies have shown that women at all stages of HIV infection have lower mean HIV-1 viral loads than men, even after controlling for CD4 count.[9, 10] Researchers at Johns Hopkins University (JHU) and the National Institute of Allergy and Infections Disease (NIAID) recently published results in the New England Journal of Medicine from one of the largest studies ever to examine gender-specific difference in HIV infection, the AIDS Linked to the Intravenous Experience or ALIVE cohort. The study found that women who developed AIDS had a median initial viral load of 17,149 copies/mL, compared to 77,822 copies/mL in men. This sex difference in viral load means that the same viral load measurement does not convey the same risk of AIDS in women and men. Under current treatment guidelines, which suggest initiation of antiretroviral therapy when viral load exceeds 50,000, many women in the ALIVE cohort would have been excluded from HIV therapy. The results of the NIAID and JHU study suggest that decisions concerning the initiation of HIV therapy should emphasize CD4+ count more than viral load.[11]

A possible mechanism for this gender-based discrepancy is a difference in the expression of the HIV virion target on T-cells (CCR5 co-receptor) in women versus men. Portales and others have demonstrated a lower membrane density of CCR5 in women, which they postulate may be caused by the inhibitory effects of progesterone on CCR5 expression.[12] Because the membrane density of CCR5 determines the in vitro infectability of a target cell by an HIV-1 R5 strain, this finding could account for the gender difference seen in HIV-1 viral loads. Thus, clinicians caring for the HIV infected woman should probably emphasize CD4 T cell count over viral load when making decisions about initiating HIV treatment.

Pregnancy

Pregnancy presents another set of considerations for HIV treatment, where there is the additional goal of preventing vertical transmission. Given the decrease in vertical transmission seen with a zidovudine (AZT, Retrovir) alone regimen in PACTG 076, it is generally agreed that zidovudine should be part of any antiretroviral regimen prescribed during pregnancy unless absolutely contraindicated.[13] The 2001 HHS Treatment Guidelines recommend treatment with combination HAART (updated treatment guidelines, specific to pregnancy, are available at http://hopkins-aids.edu/publications/report/may01_1).

It is less clear how to manage the HIV infected pregnant woman who has a high

Continued on page 4

Letter from the Editor

Dear Colleagues,

I've worked with incarcerated HIV-infected women for 12 years - as long as my son is old. He was just a newborn when I started this work, and he has lived in it, and around it, ever since. Likewise, my daughter traveled with me to prison (in my belly), and so her being is woven into all of my memories about caring for women in prison. Greater than 80% of my patients are also mothers of young children. Their talk about their children opens their lives to me and creates that critical bond of trust between patient and physician. Most of these women had primary custody of their children before their incarceration. Who cares for their children when they cannot?

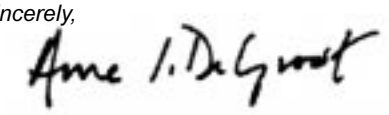
I cannot help but think about my patients' children as I walk through the three steel doors at the prison gate to get to my clinic. I walk through the same doors to leave. Going in, coming out, there is always another child at the gates. I ask: what are we doing? Is anyone thinking about the next generation? What will happen to these children? I certainly don't know any easy solutions, but I can't believe that separating a child from a mother who has HIV, or AIDS, is the right thing to do.

HEPP's tradition has been to publish an article about HIV infection in women around the time of Mothers' Day, in honor of the mothers who work in prisons and jails, in the hope of helping women living with HIV in prisons and jails, and in remembrance of the children of incarcerated mothers. This year, Dr. Onorato of U. Texas Medical Branch summarizes new information on the management of HIV-infected women in corrections, including the impact of gender-related differences in viral load. Betsy Stubblefield summarizes the recent NIJ publication on women and the justice system, highlighting new data on violence against women.

Some good news we'd like to report comes from one of our Advisory Board members: Dr. Lester Wright, Medical Director of the New York State Department of Correctional Services. Although the HIV infection rate among women in the NYDOC had been quite steady at 18 - 20% for 10 years, the 2000-01 DOH study, still in analysis, appears to show a change. Based on preliminary and incomplete data the rate is in the 14% range. Thus we may be seeing a break in the "steady increase in incarcerated women with HIV infection." That is great news!

After reviewing this issue, readers should be able to describe the management of HIV infection among women and special management issues related to pregnancy, discuss the appropriate management of cervical cytology for women who are HIV infected, and understand the implications of gender and viral load in progression to AIDS.

Sincerely,



Anne S. De Groot, M.D.

Subscribe to HEPP News

Fax to **617.770.3339** for any of the following: *(please print clearly or type)*

____ Yes, I would like to add/update/correct (circle one) my contact information for my complimentary subscription of HEPP News fax/email newsletter.

____ Yes, I would like to sign up the following colleague to receive a complimentary subscription of HEPP News fax/email newsletter.

____ Yes, I would like to have the following back issues emailed to me (please include volume/issue/date).

____ Yes, I would like my HEPP News to be delivered in the future as an attached PDF file in an email (rather than have a fax).

NAME: _____

FACILITY: _____ (Optional) # of HIV-Infected Inmates: _____

CHECK ONE: ○ Physician ○ Physician Assistant ○ Nurse Practitioner ○ Nurse/Nurse Administrator
○ Pharmacist ○ Medical Director/Administrator ○ HIV Case Worker/Counselor ○ Other

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

FAX: _____ PHONE: _____ EMAIL: _____

SIGNATURE: _____ DATE: _____

HIV Infection...

(continued from page 2)

CD4 count and low HIV-1 viral load. There is no data to suggest that combination therapy would be better than zidovudine monotherapy in preventing vertical transmission, but combination therapy does have the advantage of better virologic suppression for the mother and less chance of developing resistance mutations that might limit options for treatment in the future. The pros and cons of limiting fetal exposure to multiple agents versus preserving options for the mother in the future should be discussed in detail with the patient. The physician and patient should also discuss the potential benefit of ceasarian section.

If treatment is to be initiated for the first time during pregnancy, initiation of antiretroviral therapy should wait until the second trimester to minimize teratogenicity and avoid gastrointestinal toxicity during the early stage of pregnancy. Clinicians should avoid using efavirenz (Sustiva) in pregnancy because of evidence of teratogenicity in primate studies. The combination of didanosine (DDI, Videx) and stavudine (D4T, Zerit) should also be avoided because of multiple case reports of hepatic steatosis with lactic acidosis in pregnant women, including three deaths.

Other GYN Considerations

HIV-infected incarcerated women have particularly high rates of cervical cytological abnormalities, sexually transmitted diseases and certain gynecologic infections.[14,15] Research indicates that vaginal infections are slightly more common among HIV-infected incarcerated women than noninfected incarcerated women, while the prevalence rates of STDs are high among incarcerated women compared to free-living women overall.[16]

Furthermore, high rates of HPV infection, of cervical cytological abnormalities and of invasive cervical cancer, have been found among high-risk HIV-seronegative women and HIV-infected incarcerated women.[17] Most correctional HIV programs have adopted an increased level of vigilance for cervical cancer, leading to the institution of performing pap smears every six months as a routine component of care for HIV-infected women (See HIV 101, page 7).

- *Human Papilloma Virus (HPV) and Cervical Cancer*

A woman's lifetime risk of HPV infection is 80%. Certain types of HPV are associated with increased risk for cervical cancer. As a consequence of cervical cytology screening programs, cervical cancer is typically diagnosed in early stages. While patients with stage I disease can be treated effectively with either surgery or radiation therapy, patients with stages II-IVa disease usually receive radiation therapy as the primary treatment modality. Forty percent of patients develop persistent, recurrent or widely metastatic disease for which there is currently no consistently effective therapy. (See HIV 101) for treatment recommendations.

- *Abnormal Menstruation*

Although the Women's Interagency HIV Study data suggests a similar rate of menstrual irregularities in HIV-infected and uninfected women, there is data to suggest that prolonged anomenorrhea is more common in HIV-infected women.

Selected Antiretroviral Toxicities and Monitoring

Lactic Acidosis and Hepatic Steatosis

Women are at higher risk for severe lactic acidosis and hepatomegaly with steatosis. Although rare, these conditions are serious and potentially fatal complications of nucleoside analogue reverse transcriptase inhibitor (NRTI) therapy.[18] Risk factors for this syndrome include gender (female), obesity, and prolonged NRTI therapy.[19] Clinical symptoms are non-specific, but can include nausea, bloating, abdominal pain, anorexia, vomiting, diarrhea, malaise, and weight loss. Because of the difficulty in obtaining an accurate lactate level, monitoring is mainly by clinical symptoms and monitoring the electrolytes (for acidosis) and liver chemistries every three months or when symptoms consistent with the syndrome are present.

Fat Maldistribution

Fat maldistribution can be particularly problematic for HIV-infected women when it is manifested as breast enlargement or central obesity, contributing to musculoskeletal back pain and negative body image. The actual incidence of fat maldistribution in patients receiving HAART is unknown as lack of a standardized definition make diagnosis difficult, but estimates range from 6% to 80%. Clinical finding include central obesity, breast enlargement, cervicodorsal fat accumulation (buffalo hump), peripheral fat wasting with extremity wasting and vascular prominence, and facial thinning.[20,21,22] All of these morphologic changes develop gradually, usually after several months of therapy.

Summary

Correctional facilities can expect to care for an increasing number of HIV-infected women. Healthcare providers have a unique chance to educate and empower this population, which is at increased risk for HIV infection, and has high rates of HIV infection. Providers will need to be aware of the gender-specific issues in HIV care, such as gynecologic complications of HIV infection, management of the HIV positive pregnant woman, and monitoring for the metabolic toxicities of antiretroviral therapy, which may be more severe or more apparent in women. New appreciation of these toxicities has led to more conservative recommendations for antiretroviral use, which should be interpreted in light of the gender differences seen in HIV-1 viral loads. Regular monitoring of multiple parameters can help pick up metabolic toxicites of antiretroviral therapy before patients are clinically symptomatic.

**Nothing to disclose.*

REFERENCES:

1. GAO Report to Honorable Eleanor Holmes Norton, Women in Prison. December 1999. GAO/GGD-00-22 US General Accounting Office.

2. Private Communication, TDCJ Health Services Division, Dec 2000.

3. Brown AA, Miller B, Maguin E. J Law and Psychiatry, 1999. 22 (3-4):301-322.

4. Stevens J, Zielrler S, Cram V, Dean D, Mayer KH, and DeGroot AS. J of Womens Health, 1995. 4 (5):569-577.

5. De Groot AS. AIDS Reader, 2000; 10(5): 287-295.

6. Guidelines for the Use of Aniretroviral Agents in HIV-Infected Adults and Adolescents. February 5, 2001 at http\\www.hivatis.org

7. Mellors JW, Munoz A, Giorgi, JV, Phair JP, Rinaldo CR. Ann. Intern Med.
1997. 126:946-954.

8. O'Brien WA, Hartigan PM, Daar ES, Simberkoff MS, Hamilton JD for VA Cooperative Study Group on AIDS. Ann. Intern Med. 1997. 126:939-945.

9. Farzadegan H, Hoover DR, Astemborski J, Lyles CM, Margolick JB, Markham RB, Quinn TC, Vlahov D. Lancet , 1998. 352:1510-1514.

10. Sterling TR, Lyles CM, Vlahov D, Astemborski J, Margolick, JB, Quinn TC. JID. 1999. 180:666-672.

11. Sterling TR, Vlahov D, Quinn TC et al. NEJM. 3/8/01; 344(10).

12. Portales P, Clot J, Corbeau P. Ann. Int Med , 2001. 134: 81-82.

13. Richie, B.E., & Johnson, C. (1996). J Am Med Women's Assoc. 51(3), 111-114, 117.

14. Stevens et al.

15. Ibid.

16. Goodman AK. Abstract presented at the Annual Meeting of the Society of Gynbecologic Oncology, San Francisco CA, 1999.

17. Fortgang IS, Belitsos PC, Chaisson RE, Moore RD. Am J Gastroenterology, 1995. 90:1433-1436

18. ter Hostede HJ, deMarie S, Foudraine NA, et al.. Int J STD and AIDS. 2000. 11:611-616

19. Miller KD, Jones E, Yanovski JA, et al. Lancet. 1998. 351:871-875.

20. Lo JC, Mulligan K, Tai VW, et al. Lancet 1998. 351:867-870.

21. Herry I, Bernard L, deTruchis P, Perronne C. Clin. Infect Dis. 1997. 25:937-938.

22. Fogel, CI, Belyea, M. J Assoc Nurses AIDS Care 1999, Nov Dec 10(6) 66-74.

23. Stevens J, et al. J Women's Health 1995; 4(5). 569-577.

24. Johnson JC, Burnett AF, Willet GD, Young MA, Doniger J. Obstet Gynecol 1992; 79(3): 321.

25. Zierler S, and Krieger N. Ann R Public Health. 1997; 18: 401-436.

SPOTLIGHT: HIV in the Lives of Women as Criminals and Women as Victims

by Elizabeth Stubblefield, *Managing Editor HEPP News*

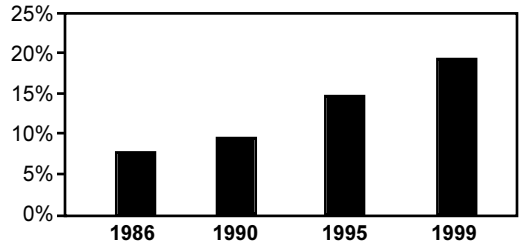
A cycle of violence and crime exists in the lives of women who are victims of domestic abuse. A September 2000 report from the 1999 National Institute of Justice (NIJ) Conference on Criminal Justice Research and Evaluation states that "women who are most marginalized by society are vulnerable to both [violence and illegal activity]" (1). Vulnerability to violence and illegal activity often leads to behaviors that put women at risk for HIV infection. According to the Kaiser Family Foundation (KFF), the proportion of women in new AIDS cases has been rising rapidly over the past 15 years. In 1986, 7% of AIDS cases were women, whereas the most recent data shows that proportion has more than tripled: 23% of 1999 AIDS cases were women (see Figure 1).(2). The 2000 NIJ report and the 2001 KFF report provide the numbers that describe an increase in violence, incarceration, and HIV infection among women in the United States.

Violence against women is widespread

According to the NIJ, one million women are victims of violence committed by an intimate each year. Some studies have found the rate to be higher: the National Violence Against Women (NAVW) survey found that 1.5 million women reported being victimized, and 7-22% of all women have experienced domestic assault. Another study found that one in three women report physical attack within her lifetime. Hospital data has revealed that 37% of women who sought emergency hospital care in 1994 were victims of domestic abuse.

Emotional abuse, as well as physical abuse, has a major impact on the health of women. The NIJ report states that "Battered women are four to five times more likely to require psychiatric treatment and five times more likely to attempt suicide than non-battered women." Many rape victims do not seek help from state or private support systems due to fear, stigma, or other emotional or physical obstacles. One study found that 84% of rape victims did not report the rape to the police.(1) Inability to access support systems, lack of trust in law enforcement agencies, fear, stigma, and other emotional or physical obstacles may explain why many women do not report to state or private support systems. These obstacles not only keep women from getting help after a violent incident, they may put women at risk for further exposure to violence.

Figure 1. Percentage of AIDS Cases that are Women



The proportion of AIDS cases that occur among women is steadily increasing, and has more than tripled since 1986 (2). This table was taken from the Kaiser Family Foundation Report on Women and HIV/AIDS, May 2001.

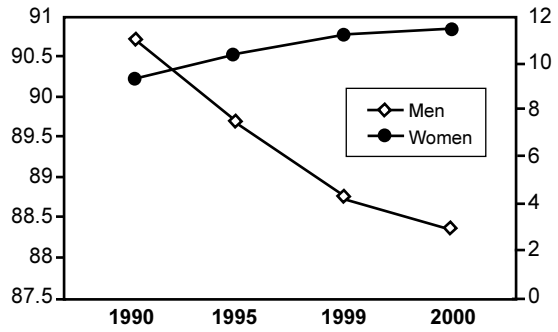
Incarceration of women is increasing faster than incarceration of men

Approximately 138,000 women are in prisons and jails in the US, which is more than triple the 1985 women inmate population (3). The prison population of women grew more than 10% annually since 1990 in some states, compared to 6.4% for men (See Figure 2).

HIV/AIDS Among Women

Women constitute one quarter of Americans living with HIV (200,000-225,000), and one fifth of Americans living with advanced AIDS. While important treatment and prevention advances have been made for HIV/AIDS, women do not appear to have benefited at the same rate as men. According to the KFF report, new AIDS cases among men fell by 60% during the 1990s, while new AIDS cases fell only 36% for women (2). Furthermore, HIV/AIDS has a higher impact on women of color. The latest data shows that 49 per 100,000 AIDS cases in women are African American, which is more than 21 times greater than the rate among White women (2.3 per 100,000). The case rate among Latinas is more than six times the rate for White women (14.9 per 100,000).

Figure 2. Women and Men As Percentage of Jail Inmates (3).



People of color are also more likely to be incarcerated than White people. According the Bureau of Justice Statistics, 16.2% of Blacks and 9.4% of Hispanics are likely to be incarcerated at some point in their lifetime, versus 2.3% of Whites (4).

Catch 22: Risking Incarceration and HIV Infection

Incarcerated women typically have a history of unmet social, education, health and economic needs, in addition to a history of victimization. Thus it comes as no surprise that the primary causes of incarceration among women are for nonviolent offenses; violating laws that prohibit the sale and possession of specific drugs. Drug sales and other nonviolent crimes are "'survival crimes' that women commit to earn money, feed a drug-dependent habit, provide for their children, or escape terrifying intimate relationships and brutal social conditions" (1).

Women who have experienced violence are more likely to engage in risk behaviors that can lead to incarceration as well as HIV infection. The NIJ reported on a study that found that women who have been raped are 10 times more likely to use illegal substances or alcohol. Furthermore, women who are involved in illegal activity, who are in a precarious legal status, or who are socially marginalized, may be less likely to call the police or other agencies when they have experienced a violent episode for fear that they might be caught. Thus these women are in a double-bind; for fear of being caught for a legal violation, they cannot report violent episodes. By not reporting violent episodes, they put themselves at greater risk for further abuse and even HIV infection. Proving this point, a 1996 survey found that at least half of all female prisoners have experienced some form of sexual abuse before their imprisonment.

Sex work is another major cause of arrest among women, and also may be linked to a history of abuse. According to the NIJ

Continued on page 6

Spotlight...

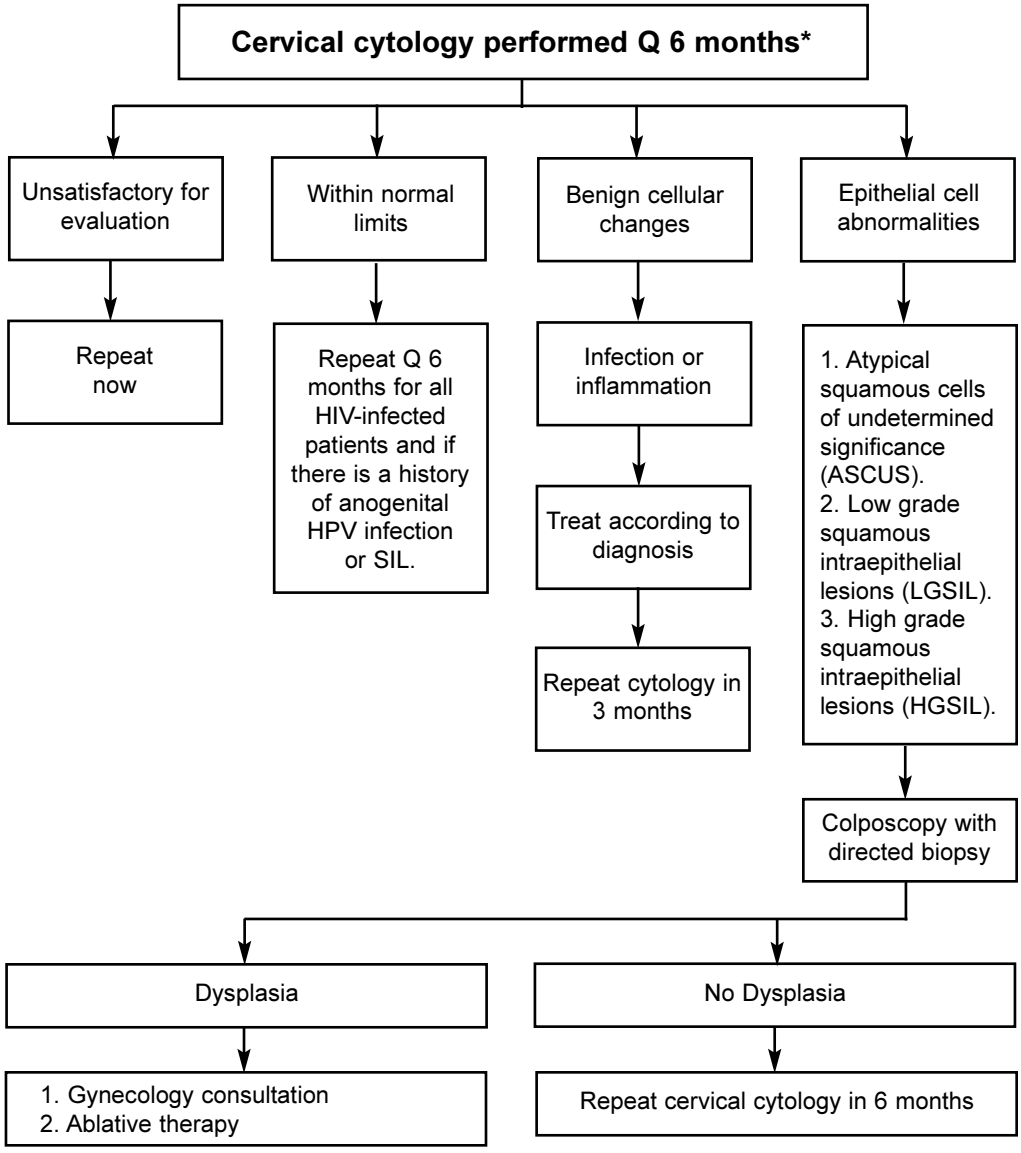
(continued from page 5)

report, 90% of sexworkers have been abused by a member of the family, and 70% have been sexually abused between the ages of 3 and 14. One study found that of 130 prostitutes, 68% had been repeatedly raped. NIJ report author Judge Kay Senin states that many of these women never received the valuable life-skills training that a healthful family environment provides. "…These girls see violence and sexual exploitation as the norm. They have never known responsible, respectful, and caring adults and peers; they have never learned how to form durable relationships based on mutual support and affection."

Note:
The authors of the report recommend more research be conducted, and suggest that current research and intervention programs adjust to incorporate the impact and prevalence of violence in the lives of the women with whom they work.

References:
1. Richie BE, Tsenin K, Widom CS. Women and girls in the criminal Justice System: papers of the 1999 Conference on Criminal Justice Research and Evaluation—Enhancing Policy and Practice Through Research, volume 3. September 2000 NCJ 180973. More information on the conference is at: http://nijpcs.org/pastconf.htm.
2. Kaiser Family Foundation (KFF). Fact Sheet: Women and HIV/AIDS. KFF, Menlo Park, CA. May 2001. Request for publications: 1-800-656-4533. http://www.kff.org/women.
3. Beck, AJ. Prisoners in 1999. August 2000, NCJ 183476, Available at http://www.usdoj.ojp.gov/bjs/pubs
4. Bureau of Justice Statistics. Criminal Offender Statistics. 5/01. http://www.usdoj.ojp.gov/bjs/crimoff.htm

HEPPIGRAM: Management of Cervical Cytology



Infection with human papillomavirus (HPV) has been causally linked with the development of cervical cancer and over 90% of invasive cervical tumors harbor HPV DNA.[1,2] Over 65 different HPV types have been indentified and grouped into low-risk or high-risk categories on the basis of each type's association with a benign or malignant disease process.[3] The high-risk types 16 and 18 can be detected in roughly 70% of all invasive cervical tumors. PCR technology (polymerase chain reaction) has been the preferred methodology for virus identification and typing on isolated DNA, and will become an adjuct means of diagnosing HPV.

Persistent HPV infection is more prevalent among HIV-infected women, thus clinicians should be vigilant about Pap smears and close gynecologic follow-up.

**Cervical cytology is recommended every 6 months because the correctional population of women is at high risk for complications.*

1. Bosch, F. X., Manos, M. M., Munoz, N., Sherman, M., Jansen, A. M., et al. Prevalence of human papillomavirus in cervical cancer: a worldwide perspective. International biological study on cervical cancer (IBSCC) Study Group [see comments]. J.Natl.Cancer Inst., 87: 796-802, 1995.
2. Liaw, KL, Glass, AG, Manos, MM, Greer, CE, Scott, DR, Sherman, M, Bruk, et al.Detection of human papilllomavirus DNA in cytologiacally normal women and subsetquent cervical squamous intraeptithelial lesions. J Natl Cancer Inst. 91 (11) 954-60 1999.
3. Pecoraro, G., Morgan, D., and Defendi, V. Differential effects of human papillomavirus type 6, 16, and 18 DNAs on immortalization and transformation of human cervical epithelial cells. Proc.Natl.Acad.Sci.U.S.A., 86: 563-567, 1989.

HIV 101

Treatment of Genital Warts by Lori Rodriques, M.D., Clinical Fellow, UCSF Dept. of Dermatology

Tx/how supplied	Wart	Dose	Comments
Podophyllin: 25% crude extract in a tincture of benzoin, applied by physician	Warts on moist surfaces	Every week, paint on lesion, wash off after 4-8 hours. Duration of 6 weeks	▪ Local irritation, ulceration, scarring. ▪ Phimoses and balanitis can occur if podophyllin is used on the foreskin or glans penis. ▪ Systemic side effects may include, fever, nausea, vomiting, confusion, coma, ileus, renal failure, paresthesias, polyneuritis and leukopenia. Podophyllin is considered a teratogen and should not be used during pregnancy. ▪ Complete response observed in 40% of patients after six consecutively weekly treatments
Podophyllotoxin (Condylox): 0.5% gel or solution applied by patient	Warts on moist surfaces	BID for 3 consecutive days each week for 4-6 week treatment cycles.	Success rates approach 60% and side effects are less than with the physician applied podophyllin preparations
Cryotherapy with liquid nitrogen	All conditions	One to two freeze-thaw cycles are applied to each wart every 1 to 3 weeks.	Freezing can be painful and may result in blister or ulcer formation. 80% of patients are free of warts during treatment and 55% are clinically negative 3 months after treatment is stopped.
Alternative: Trichloroacetic acid (TCA): 35%-85% solution	Genital warts	Weekly or biweekly	TCA has the same or lower efficacy compared to cryotherapy and results in more pain, ulceration, and is not readily available.
Imiquimod (Aldera)	Genital warts	Applied QD by patient on alternate days 3 days a week.	A topical immunomodulator, has an efficacy similar to cryotherapy and yields a low recurrence rate. It is more effective than podophyllin in treating women with external genital warts, (72% response rate) and equal or less effective in men, especially lesions on the penile shaft (33% response rate). The response rate is slow, requiring at least 10 weeks of therapy before a response is observed. Local skin irritation occurs.
Electrosurgery	Condyloma		Wart clearance occurs in 95% of patients with at least 70% of patients free of warts at 3 months. These methods are recommended for lesions that are small in size and number and can be done under local anesthesia. Scarring may result.
CO_2 laser treatment	External genital warts		60-90% response rate with recurrence rates between 5% and 10%. The advantages are reduced bleeding and postoperative pain. Disadvantages include the high cost of laser surgery, increased healing time. This method should be reserved for patients with more extensive lesions.

The continuum of HPV infection ranges from clinical, to subclinical, to latent disease. One percent of sexually active adults have clinically active disease. Five percent have subclinical lesions detected only by enhancing techniques such as acetowhitening. Twenty-five percent of sexually active adults have HPV DNA detected in areas without clinical lesions or in areas that are acetowhite negative-this is latent disease. While the risk of transmission among persons with clinical active disease is not known, the majority of couples with visible genital warts have partners that are concordantly infected. The risk of transmitting the infection from persons with subclinical or latent infection is also unknown. Latent disease may be responsible for the persistence of infection despite therapy.

Etiology

Numerous HPV types can cause genital warts. In general, HPV types 6 and 11 are low-risk types and produce benign lesions. High-risk HPV types or those associated with anogenital cancer, most commonly in the transition zone of the cervix and anus, are usually caused by HPV types 16 and 18. In a small group, HPV infection persists and may progress to cancer. The exact mechanism for this is unknown.

Clinically, condyloma appear as soft sessile masses, that average 2 to 5 mm in size but may reach several centimeters in diameter and height. Lesions are frequently multifocal and in general, their color is gray, pale yellow or pink. In women, lesions appear on the vulva, cervix, and perineum or about the anus. In men, they can occur on the penis or perianal area, and less frequently on the scrotum. Patients are usually asymptomatic however, trauma to lesions can cause bleeding, itching, or irritation. In addition, women may experience vaginal discharge.

Treatment of Genital Warts

Treatment is not shown to reduce the transmission to sexual partners nor to prevent the progression to dysplasia or cancer. Because genital warts are sexually transmitted, investigation for other sexually transmitted diseases is warranted. Women with genital warts or those whose partners have genital warts should have a routine cervical cytological screening (Papanicolaou smear) to detect cervical dysplasia. See table above for specific information on treatment.

References: 1. Baker GE, Tyring S. Therapeutic approaches to papillomavirus infections. Inf Dis Dermatol 1997, 15: 331-340. Odom RB. James WD, Berger TG. Andrew's Disease of the Skin. 9th edition. Philadelphia, (PA); W.B. Saunders Co; 2000. pp 514-51.

Save the Dates

Call for Abstracts for a Special Issue of AIDS Education & Prevention.
Abstract submission July 1, 2001
The Evaluation and Program Support Center, centered at the Rollins School of Public Health of Emory University and Abt Associates is soliciting abstracts for a special issue of the AIDS Education & Prevention – An Interdisciplinary Journal. The focus is "HIV and Corrections: Innovative Approaches to Prevention, Treatment and Care".
For more information, contact:
jcoltha@sph.emory.edu

HIV/AIDS-Healthy Women, Healthy World: 28th Annual Global Health Council Conference
May 29-31, 2001
Washington, DC
Contact Global Health Council
20 Palmer Court
White River Jct, VT, 05001
Call: 802.649.1340
Fax: 802.649.1396
Email: conference@globalhealth.org

The 5th Annual HIV Update: Contemporary Issues in Management
May 31-June 2, 2001
Cambridge, Massachusetts
Email: hms-cme@hms.harvard.edu
Visit: http://134.174.17.108/conted-bin/hmscme
Call: 617.432.1525
Fax: 617.432.1562
Sponsors: Harvard Medical School, Dept. of Continuing Ed.
CME credits are available.

Overview of Adult HIV Care for Health Professionals
June 4-6, 2001
Atlanta, Georgia
Email: pyeargi@emory.edu
Visit: http://www.seatec.emory.edu
Call: 404.727.2938
Fax: 404.727.4562
Sponsors: Southeast AIDS Training and Education Center (SEATEC), Emory University.
CME credits available.

"Management of the HIV/ Hepatitis C Co-infected Patient" A Live Videoconference Series
June 5, 2001
12:30-3:30 p.m. EST
CME credits available through Albany Medical Center.
Call: 518-262-4674
Email: rosentjh@mail.amc.edu
Visit: www.amc.edu/patient/HIV/hivconf.htm

News Flashes

Two cases of Fatal and Severe Hepatitis Associated With RIF and PZA
One of the recommended treatments for latent tuberculosis infection (LTBI) is a 9-month regimen of isoniazid (INH). In some cases, an alternative is a 2-month regimen of rifampin (RIF) and pyrazinamide (PZA). In September 2000, a 53 year-old incarcerated black man in New York died of hepatitis after 5 weeks of RIF-PZA. In December, 59 year-old white woman in Georgia was admitted to a hospital because of hepatitis after 7 weeks of this regimen. An April MMWR report summarizes the findings of the investigations of these incidents, which underscore the need for clinical monitoring for adverse effects in all patients receiving treatment for LTBI. (MMWR, April 20, 2001/ 50(15);289-291. Article available at http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5015a3.htm).

Invasive Cervical Cancer Before and After HAART
An Italian study published in the April issue of JAIDS sought to assess whether the incidence of ICC has changed since the introduction of HAART among women with a known duration of HIV infection. Utilizing a prospective cohort study, the Italian Seroconversion Study, the authors researched the incidence of Invasive Cervical Cancer (ICC) before and after the introduction of HAART in Italy. In the period 1981 to 1995, an increase was observed in the incidence of ICC and other AIDS-defining diseases. The trend continued only for ICC since 1996. According to the authors, it remains to be seen whether the increase in ICC after HAART is attributable to a decreasing competitive mortality from other AIDS-defining diseases, or whether, in fact, ICC "may not be greatly influenced by severe immunosuppression, stressing the importance of clarifying the role of immunosuppression on the development of ICC and thus of determining the direct effect of HAART on ICC." (Dorrucci M, Suligoi B, Rezza G et al. JAIDS. 4/1/01; 26: 377-380.)

Tolerability and Antiviral Activity of Fortovase plus Ritonavir
Last month, Roche announced preliminary clinical data from four ongoing studies comparing the safety and efficacy of once-daily Fortovase (1600 mg) in combination with 100 mg of ritonavir, along with two nucleoside reverse transcriptase inhibitors (NRTIs) vs. once-daily efavirenz (600 mg) plus two NRTIs in treatment-naïve HIV-positive patients. Fortovase plus ritonavir was well tolerated in this trial. Three patients discontinued participation in the trial due to gastrointestinal disorders, pregnancy or loss of contact. (International Workshop on HIV Clinical Pharmacology in Noordwijk, Netherlands, April 2-4, 2001).

Correctional Facilities Respond Quickly to TB
About 250 youths and 200 staff members are being tested for TB at Marion Juvenile Correctional Facility in Ohio. Testing has been ongoing since mid-April, when a doctor told a staff member that she may have the disease. Officials were diverting youths to other detention centers around the state and canceling weekend visitations until test results were released (Associated Press 5/2/01). In South Carolina, three inmates at the Broad River Correctional Institution have early signs of TB, and vulnerable inmates are no longer being assigned to the prison, state health officials said. No cases of TB have been confirmed, but the inmates have been isolated while the tests are analyzed. (Associated Press, 5/5/01)

Resources & Websites

Updated Guidelines for Managing HIV in Pregnancy From the USPHS Task Force:
Available at: http://hopkins-aids.edu/publications/report/may01_1.html or call: 1-800-448-0440

Women and HIV/AIDS: Overlooked and Underserved
A May 2001 Kaiser Family Foundation report to Capitol Hill examined the impact of HIV/AIDS on women and discussed the challenges facing the health care providers who care for women with HIV/AIDS. Materials from the briefing are available on the Kaiser Family Foundation website at: http://www.kff.org/women .

The AIDS Reader
http://www.medscape.com

AIDS Weekly Plus
http://www.aegis.com/pubs/aidswkly/default.asp

HIVLine
http://www.hivline.com

Hopkins HIV Report
http://www.hopkins-aids.edu/

Journal of AIDS/HIV
http://www.CCSPublishing.com/j_aids.htm\

NIH Department of AIDS Research
http://www.niaid.nih.gov/daids

Physicians' Research Network (PRN) Notebook
http://www.prn.org/

Project Inform: HIV Care and Information
http://www.projinf.org/

HIV/AIDS Treatment Information Service
http://www.hivatis.org

HIV Insite
http://hivinsite.ucsf.edu/

AEGiS: the largest HIV/AIDS resource on the Internet
http://www.aegis.com

Self-Assessment Test for Continuing Medical Education Credit

Brown Medical School designates this educational activity for 1 hour in category 1 credit toward the AMA Physician's Recognition Award. To be eligible for CME credit, answer the questions below by circling the letter next to the correct answer to each of the questions. A minimum of 70% of the questions must be answered correctly. This activity is eligible for CME credit through September 30, 2001. The estimated time for completion of this activity is one hour and there is no fee for participation.

1. An estimated _____ women are currently living with HIV in the United States.
   a) 20,000
   b) 80,000
   c) 138,000
   d) 200,000
   e) 2 million

2. Indicate which of the following are false:
   a) The proportion of inmates that are women has been increasing since 1985.
   b) The proportion of AIDS cases that are women has been increasing since 1986.
   c) New AIDS cases have fallen by 60% in the 1990s for both men and women.
   d) None of the above is false.
   e) All of the above are false.

3. Which HPV types are considered high risk, or associated with anogenital cancer?
   a) Types I and II
   b) Types 6 and 11
   c) Types 16 and 18
   d) All of the above
   e) None of the above

4. Current guidelines suggest initiating HAART when viral load >50,000 and CD4<350. Recent studies have shown that women may progress to AIDS at lower viral loads than men. How is it suggested clinicians should respond to this finding when making decisions about women with HIV?
   a) Clinicians should lower the viral load threshold for initiating HAART to account for the difference between women and men.
   b) Clinicians should emphasize CD4 T cell count when deciding when to initiate HAART in women.
   c) Clinicians should emphasize viral load when deciding when to initiate HAART in women.

5. Which of the following antiretrovirals should be avoided in pregnancy?
   a) Zidovudine
   b) Nevirapine
   c) Efavirenz
   d) Didanosine with Stavudine
   e) A and C
   f) C and D

6. Cervical Cytology should be performed every 6 months on patients with which of the following conditions?
   a) History of anogenital HPV infection
   b) History of SIL
   c) HIV infection
   d) A and B
   e) A and C
   f) All of the above

HEPP News Evaluation

5 Excellent 4 Very Good 3 Fair 2 Poor 1 Very Poor

1. Please evaluate the following sections with respect to:

	educational value	clarity
Main Article	5 4 3 2 1	5 4 3 2 1
HEPPigram	5 4 3 2 1	5 4 3 2 1
HIV 101	5 4 3 2 1	5 4 3 2 1
Save the Dates	5 4 3 2 1	5 4 3 2 1

2. Do you feel that HEPP News helps you in your work? Why or why not?

3. What future topics should HEPP News address?

4. How can HEPP News be made more useful to you?

5. Do you have specific comments on this issue?

Brown Medical School • Office of Continuing Medical Education • Box G-A2 • Providence, RI 02912
The Brown Medical School is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education activities for physicians.

For Continuing Medical Education credit please complete the following and mail or fax to 401.863.2660 or register online at www.hivcorrections.org. Be sure to print clearly so that we have the correct information for you.

Name _____ Degree _____

Address _____

_____

City _____ State _____ Zip _____

Telephone _____ Fax _____