

HIV Trends

A summary of notes with a women's focus on HIV, STDs, social development, treatments and more. For more detailed information, contact Positive Women's Network.



May 2003

Women-Specific Health

Multivitamins for HIV-Infected Lactating Mothers Improves Children's Health

NEW YORK (Reuters Health) May 23 - A large African study has shown that multivitamin supplements given to lactating mothers with HIV infection can improve their children's health.

In the May 12th issue of *Clinical Infectious Diseases*, Dr. Wafaie W. Fawzi of Harvard School of Public Health in Boston, and colleagues report the findings of a randomized trial of 1078 HIV-infected women in Tanzania who were given either vitamin A with beta carotene, a multivitamin containing vitamins B, C and E, or both supplements during pregnancy and lactation.

Children of mothers who took multivitamins had a significantly lower risk of diarrhea during the first two years of life, and significantly higher mean CD4+ cell counts, than children of mothers who did not receive multivitamins, according to the article. On average, the CD4+ count was 151 cells per microliter higher in children of women in the multivitamin arm than those in the no-multivitamin arm.

The beneficial effects of the multivitamins appeared to be similar in children with or without HIV infection.

Children of women who received vitamin A only had a reduced risk of cough with a rapid respiratory rate, which was considered a proxy for pneumonia. These children had no reduction in their risk for diarrhea and no increase in CD4+ cell counts, however.

"To our knowledge, this is the first randomized study that has examined the effect of maternal multimicronutrient supplements on infant health," the researchers write. They point out that in earlier studies, multivitamin supplements have had beneficial effects "on mortality and breast-feeding transmission of HIV-1 in subgroups of children at risk."

"Provision of multivitamin supplements (including those with vitamins B, C and E) to HIV-infected, lactating women may be a low-cost intervention to improve their children's health," the investigators conclude.

*Source: Medscape May 29, 2003. Clin Infect Dis 2003; 36: 1053-1062.
Original Source: Reuters Health Information 2003. © 2003 Reuters Ltd.*

Women-Specific Health

Nevirapine-Resistant HIV Found in Breast Milk

Feb. 13, 2003 (Boston) — Cell-free HIV-1 RNA carrying the K103N mutation, the most important resistance mutation to nevirapine (NVP), has been detected in the breast milk of at least 70% of women in the HPTN 023 trial in Zimbabwe. Higher concentrations of the mutation were found in breast milk than in plasma.

Stanford University graduate student Esther Lee broke the news here on Feb. 12 at the 10th Conference on Retroviruses and Opportunistic Infections.

She explained how plasma and breast milk were collected from the 33 women in the trial at 2, 8, 16, and 20 weeks. Both were assayed for viral load and resistance mutations to NVP.

“There was a difference of more than two logs between plasma and breast milk viral load,” said Ms. Lee. Plasma samples had a median viral load of $4.6 \log_{10}$ (range, $2.6 \log_{10}$ - $5.9 \log_{10}$); breast milk samples had a median HIV RNA viral load of $2.5 \log_{10}$ (range, $0.9 \log_{10}$ - $4.3 \log_{10}$), with little correlation between levels of the two in individual women.

However, the frequency of NVP-resistant viral mutations was significantly higher in breast milk (65%) than in plasma (24%). Ms. Lee said there did not seem to be a correlation between elevated viral load and the presence of resistant mutations. Finding the explanation for this differential selection of resistant virus in breast milk is the aim of ongoing research.

Constance Benson, MD, was concerned by the study. The K103N mutation “confers cross-class resistance to all of the currently available NNRTIs.” That could have a significant effect on the ability to offer effective regimens in resource-poor settings, specifically single-dose nevirapine administration at delivery.

However, the former chair of the conference and a University of Colorado researcher cautioned against moving precipitously. Dr. Benson said, “We need to study it in a very careful way before making broad recommendations. I would not change policy at this point.”

Mark Harrington, from the Treatment Action Group, called single-dose nevirapine “the wedge by which treatment is being introduced into resource-poor countries.” He is afraid that opponents of treatment, particularly those within some African governments, will seize upon this study as yet another excuse for resisting the introduction or widespread use of anti-HIV treatment.

*Source: Medscape May 29, 2003. Medscape Medical News 2003. © 2003 Medscape
Original Source: 10th Conference on Retroviruses and Opportunistic Infections:
Abstract 96. Presented Feb. 12, 2003.*

Women-Specific Health

New Project Boosts Empowerment of Women in Zambia

Women in Zambia's North-Western province are being helped with the knowledge and services to prevent HIV/AIDS through a project aimed at empowering the hardest hit population group.

Last month, the NGO Coordination Committee (NGOCC) - an umbrella body of women's organisations in the region - and the UN Population Fund (UNFPA), gathered in Solwezi to open 'Bumi House'. This centre will become the base for the programme.

"Bumi means life in Tonga [a local language] and this is what we want to give women - hope and life. We are trying to address issues that are at the heart of every woman in Zambia," Mary Mulenga, Executive Director of the Young Women's Christian Association (YWCA), told PlusNews.

According to Mulenga, access to accurate information was still the best way to fight the pandemic.

The programme will educate both men and women about women's rights and the options they have in preventing HIV/AIDS. Men had often been left out of HIV/AIDS and women empowerment initiatives, Mulenga noted.

"It takes two to tango. We can't leave men out, because issues such as HIV/AIDS will continue to be seen as just a woman's problem," she added.

Gender-based violence will also be addressed by the centre. "This is becoming a major problem in Zambia. We have seen an increase in the number of cases reported to our [YWCA] drop-in centres," Mulenga said.

A pilot project spearheaded by the YWCA will introduce the subject into health facilities, complemented by community-based drop-in centres. Local courts will also be sensitised to gender-based violence.

Source: © GENDER-AIDS 2002. [Internet: <http://archives.healthdev.net/gender-aids>
Email: GENDER-AIDS@healthdev.net
Original Source: IRIN Africa PlusNews reports, 5/13/2003.

Women-Specific Health

South African Scientists Develop Do-It-Yourself Pap Smear for Women

South African scientists have developed a simple do-it-yourself Pap smear kit for women dreading the annual visit to a gynecologist.

The home test designed to detect signs of cervical cancer is the brainchild of microbiologists Andreas Karas and Jonathan Keytel. "We chose a Pap smear alternative as many women find the process for collecting the smear embarrassing and so neglect to screen or do not have easy access to screening facilities," Keytel said. "A large proportion of the world's women do not for various reasons have regular Pap smear examinations. Women aren't screening themselves, yet the technology is there," he said.

The home kit, Sen-C-Test, is a combination of two proven methodologies - a self-sampling collection method and a laboratory test to detect certain strains of high-risk human papillomavirus, the main cause of cervical cancer. The Sen-C-Test kit contains a test tube with a clear solution and can be bought from a pharmacy for R30 (less than US\$4). The woman inserts a regular tampon for three to eight hours, a week before the start of her menstruation cycle, and then removes and places the tampon into the test tube. The tube contains a solution that protects and seals the cervical and vaginal cells on the tampon. The tube is returned to the pharmacy from where it is sent to a laboratory to test for signs of HPV, at a cost of about R400 (US\$51). The test has a 96 percent accuracy rate. The results are sent to the patient within 10 days by whichever means she has specified on the kit's form - via fax, email, phone or a doctor's appointment.

Embarrassment and discomfort are not the only reasons for the lack of regular check-ups. "In Muslim countries, men often forbid their wives to go to the gynecologist," Kytel said. Although the product is only recently available in South Africa, expansion into the international market is in the pipeline.

Source: CDC HIV/STD/TB Prevention News Update, Wednesday, May 21, 2003.

Original Source: Agence France Presse (05.16.03): Fienie Grobler.

Prevention

Gates Foundation Grants \$28 Million to HIV/AIDS Diaphragm Research

The Bill and Melinda Gates Foundation has granted \$28 million to a southern African AIDS initiative that will examine the effectiveness of latex diaphragms as a preventive measure for HIV/AIDS and other STDs.

The initiative is a joint effort by the South African Medical Research Council, the University of California-San Francisco, the University of Zimbabwe and US-based Ibis Reproductive Health. Gita Ramjee, head of the MRC's HIV/AIDS Prevention Research Unit, said trial sites would be set up in Umkomaas and KwaXimba in KwaZulu-Natal and Harare in Zimbabwe with an additional trial site still to be determined.

Ramjee said a study to assess the acceptability of the latex diaphragm had been done in Zimbabwe and women were found to be enthusiastic about the product. But Ramjee added that while studies have been done to test the latex diaphragm as a contraceptive, no studies have been done to test it as a prevention method for HIV/AIDS.

"Current research suggests that the port of entry for HIV is through the woman's cervix. We feel that if we cover the cervix with a diaphragm, then perhaps we can reduce the risk of women acquiring HIV," she said.

Ramjee said women would initially be taught how to insert the diaphragm and would then return to the site every three months to be tested for HIV/AIDS and other STDs. The study, which will take four years to complete, will start in September and will involve 4,500 women from southern Africa, including 1,400 from KwaZulu-Natal.

"If the product shows effectiveness, we hope that it can be marketed at a reduced cost or offered absolutely free of charge," Ramjee said.

*Source: CDC HIV/STD/TB Prevention News Update Tuesday, May 06, 2003
Original Source: Sunday Times (South Africa) (05.04.03): Ilse Fredericks*

Prevention

Attitudes of Brazilian Women to the Insertion of Vaginal Antimicrobial Products

The rapid spread of HIV/AIDS in the female population increases the urgency of developing new formulations that offer protection from this disease as well as other sexually transmitted infections.

In many cultures, women do not readily accept touching their genitals or inserting products into their vaginas. Information on this subject was collected during a study involving 635 women in Brazil to determine the preferred attributes of vaginal products. Seventy-six percent would use an idealized contraceptive method that offered dual protection even though it could only be inserted with a finger and 96% would use this method if it could only be placed with an applicator. Qualitative analyses of responses to open questions suggest that the majority of Brazilian women studied did not like to touch their vagina with their finger or to insert devices.

Although the introduction of safe and effective vaginal microbicides into many cultural settings can be successful, it should be accompanied by significant efforts to educate women about their bodies.

Source: GENDER-AIDS eForum 2003: gender-aids@healthdev.net

Original Source: Contraception 2003 May; 67 (5): 391-5

Treatments

HAART Prescriptions Differ by Gender, Race, Other Factors

NEW YORK (Reuters Health) May 20 - Gender, race, exposure mode, and alcoholism are among the factors that influence the prescription of highly active antiretroviral therapy (HAART) for HIV-infected patients, according to a report in the April 15th Journal of Acquired Immune Deficiency Syndromes.

Because of the importance in HAART prescription and adherence in reducing the morbidity and mortality associated with HIV infection, the authors explain, it is important to identify factors that decrease the likelihood of appropriate HAART use.

Dr. A.D. McNaghten from Centers for Disease Control and Prevention in Atlanta, Georgia and colleagues used multiple regression analysis to assess factors associated with HAART prescription in 9530 patients eligible for antiretroviral therapy from the CDC's Adult/Adolescent Spectrum of HIV Disease project.

Only 79.4% of the patients eligible for analysis had been prescribed antiretroviral therapy, including 57.2% who were prescribed HAART, the authors report.

Men were more likely than women to be prescribed HAART, the report indicates, and lower prescription rates were evident among intravenous drug users and patients with a current diagnosis of alcoholism or psychosis.

Factors in the multivariate analysis associated with a greater likelihood of HAART prescription included ASD enrollment at a private rather than public facility, heterosexual contact rather than men having sex with men, and Hispanic ethnicity rather than white race.

Among previously untreated patients, low CD4 counts (below 500 cells/microliter) and high viral loads were associated with an increased chance of HAART prescription, the researchers note. Among patients having a prior history of antiretroviral therapy, HAART prescription was more likely in those with more outpatient visits (at least 2 per 6-month interval) and in those with higher viral loads.

"Each of these differences deserves further study to determine whether factors such as access to antiretroviral therapy, patient or provider preferences, or health care providers' perceptions of which groups are more likely to adhere to HAART regimens could increase the prescription of HAART for these populations," the authors conclude.

"Programs to improve access to antiretroviral therapy, combined with progress in treatment and improvements in access to care and adherence, should further improve the health and survival of persons living with HIV and AIDS," the investigators add.

Source: *Medscape* May 29, 2003. *J Acquir Immune Defic Syndr* 2003; 32: 499-505.
Original Source: *Reuters Health Information* 2003. © 2003 Reuters Ltd.

Epidemiology

Inequality for African Women Linked to Increase in HIV/AIDS

Women are now the majority of people infected by HIV/AIDS in sub-Saharan Africa, averaging 58 per cent of all the infected population. In order to give voice to women's individual and collective experience with HIV/AIDS, and ensure that these concerns are raised at the governmental level so that they could be included in prevention, treatment and support programs, UNIFEM, in partnership with the Positive Women's Network (South Africa) and the Youth Against AIDS Network, organized a Consultation from 13-15 May in Cape Town, South Africa.

The Consultation brought together women living with HIV/AIDS, home-based caregivers and women's NGOs from Lesotho, Namibia, Swaziland, South Africa and Zimbabwe. They requested that their basic needs be met - clean tap water, sanitation facilities, transport, a small stipend, and shared domestic responsibilities with the men in their communities.

There was also a unanimous plea for more assistance from men, to help care for family members and to assist with domestic work. Noeleen Heyzer, UNIFEM Executive Director, attended the Consultations and promised to ensure that these concerns were submitted to the highest-level of government decision-making.

Source: © GENDER-AIDS 2002. [Internet: <http://archives.healthdev.net/gender-aids>
Email: GENDER-AIDS@healthdev.net
Original Source: UNIFEM Currents - April/May 2003 Issue, May 22, 2003.

HIV-1 Infection of Human Uterine Epithelial Cells: Viral Shedding and Cell Contact Mediated Infectivity

We examined the mechanism of human immunodeficiency virus (HIV) type 1 infection of human uterine epithelial cells to gain a clearer understanding of the events by which HIV-1 infects cells within the female reproductive tract.

We demonstrated that these cells can be productively infected by HIV-1 and that infection is associated with viral RNA reverse transcription, DNA transcription, and secretion of infectious virus. Levels of viral DNA and secreted virus decreased gradually after infection. Moreover, virus released by the uterine epithelial cells shortly after infection was able to infect human T cell lines, but virus released later did not. In contrast, human CD4+ T cell lines were infected after cocultivation with epithelial cells at both early and late stages of infection.

These data demonstrated that HIV-1 infects human epithelial cells of upper reproductive tract origin and that productive viral infection of epithelial cells may be an important mechanism of transmission of HIV-1 infection in women.

Authors: Asin SN, Wildt-Perinic D, Mason SI, Howell AL, Wira CR, Fanger MW
Source: GENDER-AIDS eForum 2003: gender-aids@healthdev.net
Original Source: *The Journal of Infectious Diseases* 2003;187 :1522-1533

Epidemiology

Viral Protein Explains Why Some HIV+ Stay Healthy

Canadian and US scientists reported Thursday that people who stay healthy years after HIV infection are more likely than other HIV patients to be infected with virus that has a particular protein alteration. The finding offers another possible explanation as to why a small number of people with HIV never develop AIDS, and points toward new therapies that might prevent the progression of HIV in other patients, as well.

Experiments with an HIV protein - viral protein R (Vpr) - revealed that altering or deleting the protein greatly decreased the number of immune cells destroyed by HIV, the process that enables HIV to progress to AIDS. Treatments that block Vpr may help infected people to stay healthy, said study author Dr. Andrew Badley of the Mayo Clinic in Rochester, Minnesota. "Since mutations in Vpr can alter the outcome of HIV disease, it is possible, if not likely, that we can develop inhibitors of Vpr that may also modify disease outcome," Badley said.

In the small number of HIV patients known as nonprogressors, levels of the virus remain low, even without treatment, and AIDS does not develop. Badley and colleagues examined the makeup of HIV extracted from the blood of people with HIV, some of whom were nonprogressors. Once researchers identified that a particular HIV mutation was present more often in nonprogressors, they designed HIV samples that contain normal or mutated forms of Vpr, and some samples lacking the protein. Badley and his team then mixed those different forms of HIV with human blood cells, and discovered that each type of virus had a different effect on immune cells.

"The amount of cell death was minimal in the virus that did not have Vpr, was quite high in the virus that contained normal Vpr, and was kind of halfway in between in the virus that contained the mutant Vpr," Badley said.

Badley explained that HIV in nonprogressors likely succeeds in killing immune cells, but at such a slow rate, people are able to make new immune cells fast enough that their immune system does not become compromised. He noted that he and his colleagues are currently looking at developing Vpr inhibitors. "Certainly, we're talking a number of years, as opposed to a number of months" before a new treatment would be available for people, he said. The full study, "Vpr R77Q Is Associated with Long-Term Nonprogressive HIV Infection and Impaired Induction of Apoptosis," is published in the May 15 issue of the *Journal of Clinical Investigation* (2003;111(10):1547-1554).

*Source: CDC HIV/STD/TB Prevention News Update, Wednesday, May 21, 2003.
Original Source: Reuters Health (05.15.03): Alison McCook. Reuters Health Information 2003. © 2003 Reuters Ltd.*

HIV Trends is produced monthly by Positive Women's Network. Our aim is to promote prevention of further infections and prompt treatment of present infections through education and discussion. Submissions are welcomed. Please e-mail Sheena Sargeant, Editor, at pwn@pwn.bc.ca. If you would like to be added to the distribution list for this report, contact Sheena at the e-mail address listed above.