



treatment. information

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Current standards of care and treatment

News from the BCCfE antiretroviral update – November 2007

by **R. Paul Kerston**

Roughly every six months, researchers and clinicians from the BC Centre for Excellence in HIV/AIDS (BCCfE) present updates in HIV standards of care and medication use to area healthcare practitioners as well as BCPWA Society members and treatment program staff. The most recent update presentation, which took place in late November, offered the latest information concerning HIV specialist care, laboratory tests, treatment programs, HIV/hepatitis C co-infection, as well as new antiretroviral (ARV) therapies, including documented side effects.

Some highlights from the Centre's most recent ARV update meeting are summarized below.

Standards of care

Dr. Rolando Barrios and Dr. Silvia Guillemi, both of the Centre's Immunodeficiency Clinic (IDC), explained the proper standards of care following diagnosis, including medical history, laboratory tests, and immunizations. They advise the following:

Medical history and examinations:

- ▶ Complete medical history, including a list of all currently prescribed medications and allergies.
- ▶ Psycho-social history to determine mental health issues, if any, and to ensure that appropriate medications are prescribed or avoided; for example, efavirenz (Sustiva) is not recommended in certain cases.
- ▶ Complete physical examination, accompanied by a review of respiratory, digestive, cardio-vascular, nervous, skin, and other body systems.

Blood laboratory tests:

- ▶ CD4 cell count and fraction/percentage
- ▶ HIV plasma viral load
- ▶ Complete blood count and lymphocyte differential (counts five specific types of white blood cells and diagnoses active infections)
- ▶ Liver function tests
- ▶ Kidney function tests
- ▶ Cholesterol measurements (to assess heart health)

Genotyping and virtual phenotype testing including:

- ▶ HLA-B*5701 genetic testing (abacavir (Ziagen) hypersensitivity screen)
- ▶ Viral hepatitis screening for types A, B, and C (to check for current or prior infection)

Disease screening and early disease detection:

- ▶ Toxoplasmosis (may indicate need for prophylaxis and/or treatment)
- ▶ Syphilis (requires urgent medical treatment)
- ▶ Tuberculosis (if CD4s are >200; test results are inconclusive with CD4 levels <200)
- ▶ Sexually Transmitted Infections (particularly gonorrhea and chlamydia)
- ▶ Vaginal, cervical, and rectal cancers (PAP smears for men and women)

Vaccinations:

- ▶ Pneumococcal disease
- ▶ Annual flu shots
- ▶ Hepatitis A and B (if not already immune)

Confirm prior immunizations (and provide any needed boosters) for:

- ▶ Polio
- ▶ Tetanus
- ▶ Haemophilus influenza type B
- ▶ Meningitis
- ▶ Measles, mumps, and rubella (no boosters unless CD4 counts are relatively strong; otherwise, live virus in the vaccine is potentially dangerous)

Genotyping and virtual phenotyping

Dr. Richard Harrigan, research laboratory director at the BCCfE, presented on the topic of genotyping and the associated virtual phenotyping procedure. HIV genotyping refers to the actual DNA sequence of the virus; the phenotype reflects the physical traits or behavior expressed by the genotype. HIV genotyping has historically been the more commonly used technology for drug resistance testing while phenotype testing measures the amount of medication necessary to suppress viral replication. According to Dr. Harrigan, genotyping is an extremely advantageous practice that should be a standard of care prior to initiation of treatment. This test is a significant shift in medical opinion since, only a few years ago, genotyping was carried out only following drug failure.

Dr. Harrigan also stressed the usefulness and accuracy of the HLA-B*5701 genetic test which screens for abacavir (Ziagen) hypersensitivity. This test is important for the roughly five to eight percent of HIV-positive people who experience a serious adverse reaction to this medication; it is critical for people with abacavir (Ziagen) sensitivity to

discontinue use of this medication, and especially not to resume this drug or combination therapies containing abacavir (Ziagen), as this could be fatal.

HIV/hepatitis C co-infection

Dr. Mark Hull presented on the topic of HIV/hepatitis C (HCV) co-infection. According to his report, detection of HCV may be possible as early as seven or eight weeks following exposure, even though there is unlikely to be any sign of illness at that time. Hull stressed that “HIV has been demonstrated to have a significant impact on HCV infection” with decreased rates of spontaneous clearance of hepatitis C and higher HCV viral loads. Also, with HIV/HCV co-infection, there is an increased risk of damage to the liver with the HIV drug nevirapine (Viramune) as well as with full dose ritonavir (Norvir), although this last drug is rarely used now.

Proposed treatment protocol for HIV/HCV co-infection involves treatment of hepatitis C initially, if a person’s CD4 counts are >350. Where CD4 counts are <200, HIV treatment should be prioritized. To maximize a successful treatment response, an 80 percent adherence to the HCV medications is required. New guidelines on treatment with pegylated interferon and ribavirin (Pegasys RBV or Pegatron) indicate medication for 24–48 weeks, depending upon virus type. Results at four weeks of HCV treatment are predictive of overall success.

New antiretroviral treatments

Dr. Julio Montaner, director of the BCCfE, focused on several items related to new antiretroviral (ARV) therapies. First, Dr. Montaner stated that the new medication darunavir is at least equal in effectiveness to the lopinavir/ritonavir combination (Kaletra), and is designed for and works well with both treatment-naïve and more drug-experienced patients. The most common side effect documented with darunavir (Prezista) has been an associated rash in some patients. Dr. Montaner also mentioned that raltegravir (Isentress) is the next drug in the integrase inhibitor class, and results appear promising.

Finally, Dr. Marianne Harris reviewed toxicity profiles of the new ARVs presented by Dr. Montaner. She also noted side effects from the new medication, Atripla (a combination of three generics: efavirenz, emtricitabine, tenofovir), which include possible kidney problems, rash, headaches, and dizziness. ☹

A list of 2008 current antiretroviral drugs in BC can be found on page 4 in the Reality Bites section.

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