Interdisciplinary Case Conference

HIV: Still Deadly After All These Years
Friday December 7th, 2007, Tuality Education Center 2pm-4pm

“It's not going to happen to me. And I'm here saying that it can happen to anybody, even me, Magic Johnson.” These words were spoken by basketball hall-of-famer Earvin "Magic" Johnson at a press conference on November 7, 1991, to the shock of an entire nation. Johnson represents one of the first sports celebrities to publicly announce his HIV-seropositive status. A star basketball player who is HIV positive? How could this have happened?

In 1992, Magic played in the NBA All-Star Game and on the gold-medal-winning U.S. Olympic basketball team. He served as head coach of the Lakers in 1994 and returned as a player on the team in 1996, but decided it was time to retire and channel his energies into other arenas outside of basketball. Currently, Johnson is CEO of his own business, Magic Johnson Enterprises (MJE). He also has established the Magic Johnson Foundation, which helps inner-city communities deal with issues surrounding HIV/AIDS and raises funds for research and prevention efforts. His time is also spent with his wife and three children.

Johnson exercises regularly and eats a healthy diet. He currently does not experience any of the symptoms associated with HIV infection or AIDS.

Although Magic Johnson tested positive for HIV in 1991, his routine HIV tests show that his virus load is currently at undetectable levels and does not show AIDS-related symptoms. Thus, Johnson is considered a non-progressor. Many patients who are non-progressors live with HIV without major health complications and their immune system seems to keep the virus under control. Progressors are patients who have uncontrollably high virus load levels and advance to AIDS quickly, usually within five years after infection.
What keeps Magic Johnson alive and symptom free?

Magic Johnson has worked with Dr. Michael Mellman, his personal physician for the past 20 years, to try to keep the virus under control using a combination of antiretroviral drugs. This combination therapy is termed HAART or Highly Active Anti-Retroviral Therapy. The "drug cocktails" that make up a HAART regimen combine the power of multiple drugs to block multiple targets in the HIV life cycle. Central to Magic's therapy regimen is a drug called Combivir®, a combination of two drugs: lamivudine and zidovudine, which are nucleoside reverse transcriptase inhibitors. You may be familiar with zidovudine by another name, AZT. HAART regimens can cost an average of $1,000 per month or more depending on the source and type of drugs administered.

Johnson has been working as a spokesperson for GlaxoSmithKline, the company that produces Combivir®. Most recently he has entered into a partnership with Abbott Laboratories Inc. to address health disparities among minorities, particularly on HIV prevention and testing. In 1985, Abbott Laboratories Inc developed the first licensed test to detect HIV antibodies. The medication Magic Johnson takes is not a top secret magic bullet but rather a commercially available antiretroviral treatment. Thus, the same medication that Magic Johnson takes to control his HIV infection is available to everyone who is HIV-positive.

Questions

1. What is the difference between HIV and AIDS; what are some symptoms associated with acute phase HIV infection; what are the symptoms of AIDS?

2. List and explain:
   a. the major routes of HIV transmission.
   b. positive prevention.

3. Based on the HIV life cycle, propose potential anti-HIV treatment targets. Which targets would be most effective in blocking HIV infection? Which targets would be least effective?
4. What type of unique therapeutic challenges does a patient with AIDS face compared to patients who are living with other types of chronic diseases (e.g., diabetes, cardiovascular diseases, or osteoarthritis)?

5. What is the advantage of using multiple targets during HAART (Highly Active Anti-Retroviral Therapy)? Do you agree with the statement "The drugs he takes are available to everyone"? What are some factors that might make this an overstatement?

6. HIV attacks the immune system. How does this affect the type and number of drugs that are prescribed to patients with AIDS? What are some additional considerations that health care providers should have when treating patients on HAART?

7. As a spokesperson for GlaxoSmithKline and now for Abbott Laboratories Inc.,
   a) What impact will Magic Johnson have on how HIV-positive patients are viewed?
   b) What influence will he have on the future of Abbott Laboratories Inc? On other HIV-positive African-Americans?
   c) What ethical aspects can you think of associated with using Johnson as a spokesperson by GlaxoSmithKline or Abbott Laboratories Inc.?
   d) What benefits are associated with Magic Johnson's announcement concerning his HIV-positive status? What risks or drawbacks can you think of associated with his announcement?