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Opportunistic Infections Associated with Human Immunodeficiency Virus

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Description

HIV (Human Immunodeficiency Virus) attacks the body's white blood cells (leucocytes). As a result, infections can take advantage of a weakened immune system, which leads to cancer and other neurological problems. The three stages of HIV infection are (1) acute HIV infection, (2) chronic HIV infection and (3) Acquired Immunodeficiency Syndrome (AIDS). There is no permanent cure for HIV, but treatment with HIV drugs called as Antiretroviral Therapy or ART can slow or prevent the progression of HIV. One of the most common and life-threatening causes of pneumonia in people whose immune systems are severely compromised by HIV is infection with the bacterium *Streptococcus pneumoniae*, also known as pneumococcus. People with HIV should be vaccinated to prevent Streptococcus pneumonia infection.

Infections associated with HIV are syphilis, herpes, chlamydia, gonorrhea, or bacterial vaginitis. HIV can weaken a person's immune system. This makes the body susceptible to various diseases. Over time, HIV attacks the CD4 cells in infected persons. These cells play an important role in maintaining a healthy immune system. People living with HIV can actively reduce their chances of developing common life-threatening illnesses by taking prescribed daily medications and practicing healthy lifestyle habits. Opportunistic infections (OI) take advantage of a weakened immune system. In general, there are no complications from HIV when the CD4 count in the body exceeds 500 cells per cubic millimeter. Most life-threatening complications occur when the CD4 count decreased and if they are about less than 200 cells per cubic millimeter. OI disorders may have little or no significant impact on people with healthy immune systems. But they can have a devastating effect on people infected with HIV. OI is usually present when the CD4 count is below 200 cells per cubic millimeter. This stage is considered as stage-3 HIV infection.

In general, HIV-positive individuals do not infect by OI's when their CD4 count exceeds 500 cells per cubic millimeter. HIV does not spread easily from one person to another. HIV virus is not airborne like cold and flu viruses. HIV will transmit through blood and some other body fluids. A person gets infected with HIV if any one of body fluids must enter the blood from an HIV-infected person. Viral load is the amount of HIV in the blood of an HIV-infected person. In an infected person if there is increase in viral load, the more likely that person is to transmit HIV. Viral loads are highest during the acute phase of HIV if they didn't receive proper treatment. The infected person has to talk with friends, family, and other supporters about their feelings. They have to do various activities that relieve stress, such as sports. A person has to get enough sleep each night to feel rested. An infected person has to learn relaxation techniques such as meditation, yoga and deep breathing.

The following OIs are defined as stage 3 HIV (AIDS-defined) illness by the Centers for Disease Control and Prevention: Common infections with HIV are (1) Candidiasis which is a common fungal infection, it can be treated with antifungal drugs. (2) Coccidioidomycosis is also a common fungal infection can lead to pneumonia if left untreated. (3) Cryptosporidiosis is diarrheal disease often becomes chronic. It is characterized by severe diarrhea and abdominal cramps. (4) Cytomegalovirus is widespread global virus affects most adults at some point in their lives often accompanied by eye and gastrointestinal infections. (5) Cryptococcosis is a fungal infection often enters through the lungs. It spreads rapidly to the brain and often causes cryptococcal meningitis. If that person is left untreated, this fungal infection is often fatal. (6) HIV-associated encephalopathy is often called HIV-associated dementia. It can be defined as a degenerative brain disease that affects people with CD4 counts below 100. (7) Herpes simplex causes red, painful sores around the mouth and genitals. (8) Shingles is caused by same virus that causes chickenpox. After a person recovers from chickenpox, the virus stays dormant in their body. Shingles are painful blisters that cause pain on the surface of skin. There is no cure but drugs are available to relieve pain.