

According to national institute of health

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According to National Institute of Health (NIH) (2006), Acquired Immunodeficiency Syndrome (AIDS) is caused by Human Immunodeficiency Virus (HIV) by gradually destroying CD4+ T cells (also called "T-helper cells"), which play a significant role in the immune response system.

In a healthy subject the CD4+ T cells range between 800 to 1,200 cells/mm³ but when this count falls below 200 cells/mm³, the individual is most vulnerable to "opportunistic infections" and cancers typical of AIDS.

From the above it is evident that body has its own mechanism to prevent infections i. e., immune response system comprising of CD4+ T cells which are actually attacked by HIV systematically destroying the CD4+ T cells. These cells are active in fighting back infections attacking the body, thus once their count falls abnormally the body is vulnerable to the so called "opportunistic infections" which are typical of AIDS.

Grant and Cock (2001) stated that general symptoms in the early stages include loss of weight, fever, sweating during nights, diarrhea and frequent skin disorders especially of varicella zoster, fungal infections and pruriginous dermatitis leading to itchy rashes resulting into ulcerations and healing with pigmented macules.

However the expanded definition of AIDS states that in addition to the above mentioned symptoms an individual is stated to be suffering from AIDS if the test for HIV antibody gives a positive result subject to one or more of the following conditions:

- ü Weight loss of more than 10%
- ü Cryptococcal meningitis

- ü Pulmonary or extra pulmonary tuberculosis
- ü Kaposi's Sarcoma
- ü Neurological impairment sufficient to prevent independent daily activities.
- ü Candidiasis of the oesophagus and oral region accompanied by dysphagia
- ü Recurrent episodes of pneumonia with or without aetiological confirmation
- ü Invasive cervical cancer

Candidiasis of the oesophagus and oral region is caused to infection by fungus in immunocompromised patients such as those suffering from AIDS and gradually no medication may be effective in future course of time ultimately leading to loss of appetite and weight.

Cryptococcal meningitis is infection of the brain and is due to spread of fungus from lungs to the brain through blood circulation. People who have defects in their cell-mediated immunity such those suffering from AIDS, are susceptible to disseminated cryptococcosis. Cryptococcal meningitis is fatal. The fungus infects the nervous system causing inflammation of the membranes covering the brain and spinal cord.

The more frequent probable causes of HIV related diseases include cerebral toxoplasmosis and cryptococcal meningitis, “ cerebral toxoplasmosis most often presents as a space occupying lesion of the brain, and cryptococcosis as chronic meningitis” thus brain gets effected in particular and nervous system in general.

One of the important “ opportunistic infections” includes tuberculosis and may be detected at any stage in the course of immunodeficiency. Pulmonary

tuberculosis is similar to non-HIV infected subjects in the initial stages of HIV infection, but the advanced stages of immunodeficiency exhibit “disseminated and multibacillary nature of tuberculosis” thus causing extensive damage to lungs in general and pulmonary system in particular.

Pneumonia is an acute or chronic inflammation of lungs caused due to infection caused by a bacteria, virus or fungus. Patients suffering from AIDS easily get affected by opportunistic infections causing pneumocystis pneumonia or cytomegalovirus pneumonia.

People suffering from AIDS are infected by various types of pneumonia affecting the lungs and respiratory system, thus respiratory system gets seriously affected along with the immune system.

Kaposi's Sarcoma is cancer of skin, mucous membranes and blood vessels. Kaposi's Sarcoma is characterized by bleeding at different sites on patient's skin with the formation of round or elliptical lesions about quarter inch to one inch in size.