

Editorial**HIV / AIDS Control and its Prevention****Mohsin Masud Jan**

Editor

HIV/AIDS remains a major public health issue that affects millions of people worldwide. The Human Immunodeficiency Virus (HIV) targets the immune system and weakens people's defence against many infections and some types of cancer that people with healthy immune systems can fight off. As the virus destroys and impairs the function of immune cells, infected individuals gradually become immune-deficient. Immune function is typically measured by CD4 cell count.

The symptoms of HIV vary depending on the stage of infection. The initial period is called acute HIV. People living with HIV tend to be most infectious in the first few months after being infected. In the first few weeks after the initial infection, people may experience no symptoms or an influenza-like illness, including fever, headache, tiredness, sore throat, large tender lymph nodes, a rash on the trunk. As the infection progressively weakens the immune system, they can develop other signs and symptoms, such as weight loss, fever, diarrhoea and cough. Without treatment, they could also develop severe illnesses such as tuberculosis (TB), meningitis, severe bacterial infections and cancers such as lymphomas and Kaposi's sarcoma.

The initial symptoms are followed by a stage called chronic HIV. Without treatment, this second stage can last from about three years to over 20 years (average, eight years). Typically, there are few or no symptoms at first. However, many people experience fever, weight loss, gastrointestinal problems, and muscle pains near the end of this stage. Between 50 percent and 70 percent of people also develop persistent generalised lymphadenopathy, characterised by unexplained, non-painful enlargement of more than one group of lymph nodes for over three to six months.

In the absence of treatment, an HIV infection will eventually progress to AIDS. The most advanced stage of HIV infection is acquired immunodeficiency syndrome (AIDS), which can take many years to develop if not treated. The most common initial conditions that alert people to the presence of AIDS are pneumocystis pneumonia, cachexia in the form of HIV wasting syndrome, and oesophageal candidiasis. Other common signs include recurrent respiratory tract infections.

Additionally, people with AIDS frequently have systemic symptoms such as prolonged fevers, sweats (particularly at night), swollen lymph nodes, chills, weakness and unintended weight loss. Diarrhoea is another common symptom, present in about 90 percent of people with AIDS. They can also be affected by diverse psychiatric and neurological symptoms independent of opportunistic infections and cancers.

It spreads by three main routes: sexual contact with an infected individual, significant exposure to infected

body fluids or tissues such as blood and blood products, semen, and other genital secretions, or breast milk, and from mother to child during pregnancy, delivery or breastfeeding. HIV frequently spreads among intravenous drug users who share needles or syringes. There is no risk of acquiring HIV if exposed to faeces, nasal secretions, saliva, sputum, sweat, tears, urine, or vomit unless these are contaminated with blood.

HIV does not spread by coughing, sneezing, or casual contact (*e.g.*, shaking hands). HIV is fragile and cannot survive long outside the body. Therefore, direct transfer of bodily fluids is required for transmission.

Preventive measures include safe sex, needle exchange programmes, treating those who are infected, as well as both pre-and post-exposure prophylaxis. Disease in a baby can often be prevented by giving both the mother and child antiretroviral medication. Attempts to reduce intravenous drug use and to discourage the sharing of needles led to a reduction in infection rates.

Antiretroviral therapy represents an important prevention strategy. Research has indicated that pre-exposure prophylaxis, in which uninfected persons take an antiretroviral pill daily, can effectively prevent infection.

There is currently no cure. Treatment consists of highly active antiretroviral therapy (HAART), which slows the progression of the disease. Treatment also includes preventive and active treatment of opportunistic infections. Rapid initiation of antiretroviral therapy (within one week of diagnosis) appears to improve treatment outcomes. Once treatment is begun, it is recommended that it is continued without a break.

The WHO has recommended that all people living with HIV be provided with lifelong ART. This included children, adolescents, adults and pregnant and breastfeeding women, regardless of clinical status or CD4 cell count.

The benefits of treatment include a decreased risk of progression to AIDS and a decreased risk of death. Treatment also improves physical and mental health. With treatment, there is a 70 percent reduced risk of acquiring tuberculosis. Additional benefits include a decreased risk of transmission of the disease to sexual partners and a decrease in mother-to-child transmission. Treatment recommendations for children are somewhat different from those for adults. The World Health Organisation recommends treating all children less than five years of age; children above five are treated like adults.

A generally healthy diet is recommended. High intakes of vitamin A, zinc and iron can produce adverse effects in HIV-positive adults and are not recommended unless there is documented deficiency.