Ocular Manifestations of HIV Infection

Globally, there were an estimated 33.2 million (estimate range, 30.6–36.1 million) people living with HIV infection or AIDS in 2007, an increase from 29.5 million in 2001.\(^1\) This retrovirus infections, unknown up to 30 years ago has already caused nearly 25 million deaths.

The annual incidence of new HIV infections declined from an estimated 3.0 million in 2001 to an estimated 2.7 million (estimate range, 2.2–3.2 million) in 2007. There were an estimated 2.0 million (estimate range, 1.8–2.3 million) HIV-related deaths in 2007.

From 2002 to 2007, the number of people receiving antiretroviral treatment (ART) in developing countries increased from 300 000 to 3.0 million, which was 31% of those who needed treatment.\(^2\) Although the number of new HIV cases has declined in recent years (3.0 million in 2001 to 2.7 million in 2007), but the rate has increased in many countries like Iran. Still sub-saharan Africa remains the mostly affected region in the world and contains 67% of all people infected by this retrovirus.

According to this report of WHO\(^1\) an estimated 5.0 million people in Asia are infected and 380000 cases were newly recognized in 2007.

In a report from the registry of the ministry of health of Iran in October 2008\(^3\), 18,320 people were infected by HIV which indicates a 30% increase from 2007. In this report 1,542 of the infected cases have developed AIDS and 2800 have died. In Iran drug users compose 80.8% of the infected cases and 11.9% are infected by sexual pathway.

According to the estimation of WHO the number of affected people with HIV virus in Iran is much higher than the official ministry report, and in 2009\(^2\) it has been estimated that there are 83,000 people who are carriers of the AIDS virus in this country.

The clinical manifestations of the disease pass through several stages. The incubation period is 2 to 8 weeks and in 10 to 40% of cases an acute infection with fever and lymph adenopathy develops which resolves in days or weeks, then a chronic infection ensures with gradual decrease in CD4 lymphocyte production and consequently reduction of immunity. This chronic stage may be asymptomatic or may be associated with fever, malaise, diarrhea night sweats and generalized adenopathy. Some minor opportunistic infections such as herpes could be present at this stage of the disease.

Progression of the disease leads to AIDS which may take years. At this stage major opportunistic lesions develop.

Since 1996 the use of highly active antiretroviral therapy (HAART) has reduced the severity and mortality of the disease. A standard HAART includes 3 or more anti-HIV drugs including “Reverse Transcriptase Inhibitors” blocking the enzyme “Reverse Transcriptase, responsible to change RNA (containing the genetic code) to DNA which is inserted into the host cells, and “Protease inhibitors” modifying and inactivating some of the HIV structural proteins.

The ocular manifestations of HIV and AIDS are frequent (70%) and very diverse, including: herpes zoster ophthalmicus, Kaposi sarcoma, squamous cell carcinoma, uveitis, retinal vasculopathy, cytomegalovirus, acute retinal necrosis, toxoplasmosis, progressive outer retinal necrosis, tuberculosis, syphilis etc. which makes the task of ophthalmologist very difficult to diagnose and treat these lesions.

In this issue of Iranian Journal of Ophthalmology Dr. Abdollahi et al (pages: 44-48) report 41 cases of HIV* and AIDS patients in Iran and investigate their ocular lesions. 37% of these patients have had ocular disorders and only one patient has been on AIDS stage which is not surprising since they have been all on HAART. The most common ocular involvement has been vitritis (12.2%) and only one case of CME retinitis has been seen.
Although, this is a small case series reported by the authors but this could initiate and follow many new investigations on such an important epidemiological subject.

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References

