

## EDITORIAL

### AIDS

Within seven years the acquired immune deficiency syndrome (AIDS) has become a household name and is a worldwide public health problem. The Centres for Disease Control (CDC) defines AIDS as the occurrence of an opportunistic infection or certain malignancies which are indicative of an underlying cellular immunodeficiency in a patient who has no obvious cause for that immunodeficiency.

AIDS was first described in 1981 in homosexual men on the East and West Coast of the USA. In 1982 the link with intravenous drug abuse emerged. Later that year the disease was noticed in haemophiliacs and several reports involving transfusion of whole blood and blood products followed. At the same time it became clear that a very similar disease was occurring in Central and Eastern Africa.

The growth of the AIDS epidemic seems outstanding; in the USA 350 cases were notified in 1982 and by 1988 the number has multiplied twenty times to 65,099. Similarly in the United Kingdom, numbers have risen from 3 cases in 1982, to 1794 in September 1988. By August the 1st 1988, more than 108,000 AIDS cases had been reported to the World Health Organization although the true number is certainly a great deal more.

The retrovirus, now named human immunodeficiency virus (HIV), was identified as the agent responsible for AIDS in 1984 and the efficient antibody screening test was available twelve months later. The knowledge that a virus was the cause of the disease led to the realization that there were many people infected with HIV who did not have AIDS (HIV carriers). The virus has been isolated from blood and semen in large amounts and small amounts have been found in tears, conjunctival and corneal tissue, vitreous, brain and retinal endothelial cells as well as many other organs. However, transmission only seems to occur via either blood, semen, vaginal secretions or breast milk. The virus is therefore primarily transmitted by sexual contact or use of contaminated needles or blood products. In Western societies, the majority of people infected with HIV are either homosexuals or intravenous drug users. The majority of these are both asymptomatic and unaware of the infection, although they may be infectious to others.

Ophthalmologists are often asked to examine AIDS patients and HIV carriers as one third of patients will eventually develop eye problems of whom the majority will become blind. The opportunistic infection of cytomegalovirus retinitis in the eye is the first manifestation of AIDS in 5% of patients and other rarer presentations include optic neuritis, gaze palsies and excessively long eye lashes. Moreover, patients with AIDS develop rheological problems with high viscosity and microvascular disease both of which are visible in the conjunctival and retinal vessels and therefore the ophthalmologist is in a privileged position to examine these minute changes in the circulation. It is probable that these vascular changes occur just before the development of opportunistic infections and might therefore be of prognostic importance. Carriers of HIV usually have some degree of immunodeficiency and are thus more likely to develop common infections. Bacterial and viral conjunctivitis and herpes zoster ophthalmicus are of particular interest to the ophthalmologist and the clinical picture in these patients is often very severe.

Inevitably, the Ophthalmologist will face the problem of having to tell the patient that their disease may be HIV-related. Testing for HIV necessitates counselling both before and after the test, with considerable medical and psychological back-up. The best way of management of this problem is probably to discuss the differential diagnosis with the patient, and then referral to the Genito-urinary Medicine Clinic for counselling and possible test. HIV testing should never be done without the knowledge and consent of the patient.

HIV has not been known to be transmitted in an Ophthalmology Clinic or by ophthalmic procedures. Transmission to health workers has occurred through deep needlestick injuries although this risk is less than 1%. Five cases of infection amongst health workers have been recorded through excessive contamination with infected blood of mucous membranes and broken skin. HIV is inactivated by heat and several disinfectants including 1:10 solution of sodium hypochlorite (bleach), hydrogen peroxide, ethanol and glutaraldehyde. Ophthalmologists should take simple precautions to prevent infection of staff and patients. Gloves should be worn when contact with body fluids is expected and any skin exposure should be followed by thorough hand washing with soap and water. Tonometer heads should be soaked in bleach for 10 minutes and then washed thoroughly with water and dried. Other instruments should be washed thoroughly with soap and water before routine sterilization. Other Clinic staff and Nurses should be re-assured that they will not catch AIDS from the patient.

It is clear that the role of the ophthalmologist has become central to the diagnosis and management of AIDS, so it is essential that all practicing ophthalmologists become aware of its ocular manifestations now.

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