Part One

CHAPTER 1

NATURE OF HIV AND AIDS

INTRODUCTION

The epidemic of AIDS has now entered into the third decade! Yet the most alarming factor is that, in spite of the vast medical and scientific advancement, it is still spreading unchecked. It has already inflicted pain and suffering among many millions around the globe. Hundreds and thousands of Indians will die from AIDS in the coming few years. In another few years India is expected to become one of the worst affected countries. These are factual observance made by the world bodies as we have already seen. The cause of AIDS was not discovered until the virus HIV infected hundreds of people. This virus that causes AIDS is an elusive enemy, unlike most
other viruses. In a relatively short time, scientists have learnt much about HIV and the way it causes AIDS!  

1.1 MEANING OF AIDS:

The word ‘AIDS’ is an acronym for Acquired Immune Deficiency Syndrome. In order to understand the disease correctly, we can divide these letters and read this way:

<table>
<thead>
<tr>
<th>A</th>
<th>Acquired</th>
<th>Freely Received</th>
<th>Infection</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Immune</td>
<td>Immunity System</td>
<td>Destruction of body’s immune system</td>
</tr>
<tr>
<td>D</td>
<td>Deficiency</td>
<td>Lack of defense</td>
<td>Attack by viruses</td>
</tr>
<tr>
<td>S</td>
<td>Syndrome</td>
<td>Sign of</td>
<td>Attack by opportunistic Diseases</td>
</tr>
</tbody>
</table>

- **Acquired** – It means that AIDS is not inherited, nor does it just develop on its own. The cause of AIDS is due to some contact or infection outside the person’s body.
- **Immune** – This refers to the body’s disease fighting system that HIV damages.
- **Deficiency** – Stands for the type of damage suffered by the body’s immune system: the immune system becomes deficient as HIV destroys the helper cells or 4CD cells.

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• **Syndrome**: It means that AIDS is actually a group of symptoms and illnesses, rather than a single ailment.

AIDS is an epidemic caused by HIV. Hence AIDS is the medical condition of a person whose immune system is destroyed by HIV. Such a person dies not because of AIDS, but because of opportunistic infections caused by HIV. Yet prior to 1982 this acronym did not exist, and AIDS was unknown. But now after 20 years, many Governments view AIDS with concern as it delays or prevents essential developments in many countries of Africa, Asia and South America.

1.1.1 **Human Immunodeficiency Virus (HIV)**

AIDS is an infectious disease caused by the Human Immunodeficiency Virus. In a shorter form it is called HIV. The Virus is small to be visible even while using an ordinary laboratory microscope. The word ‘HIV’ is made up of three letters as follows. We can understand this in this way:

<table>
<thead>
<tr>
<th>H</th>
<th>Human</th>
<th>Human</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Immunodeficiency</td>
<td>That which destroys human immune system</td>
</tr>
<tr>
<td>V</td>
<td>Virus</td>
<td>Virus</td>
</tr>
</tbody>
</table>
• **Human** – This virus infects only human beings.

• **Immunodeficiency** – HIV destroys the body’s immune system, which is responsible for protecting humans against diseases as explained above.

• **Virus** – HIV shares biological characteristics with other viruses that are not common to living cells.

HIV is incapable of independent existence. W.J. Smith defines it as follows: ‘A virus is nothing more than an inert, inorganic, material looking for a living cell in which it might reside.’ According to G. Thomas, ‘a virus is an extremely small organism visible only through an electron microscope. Viruses cause a wide variety of diseases in humans who thereafter do not respond to any treatment.’ The HIV that causes AIDS is about one sixteen thousandth the size of a head of a pin. This devastating virus has brought on much more pain and suffering on human civilization than any other similar organism.

1.1.2 **Origins of HIV/AIDS**

The exact origin of HIV/AIDS is not known. There are several theories. According to one theory HIV/AIDS has been

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24 What you must know about Aids. Article in *The Week*, Kottayam, Kerala, Aug 19, 2001

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around for hundreds of years. It was restricted to some remote countries. Due to the non-advancement of medical science people did not take it seriously. But when hundreds of people died due to this strange illness, efforts were made to identify it. However this explanation is far from satisfaction. There is little evidence to show that people were infected with HIV anywhere in the world before 1950. Up to now four theories have been put forth regarding the origins of HIV. The debate still goes on.

1.1.2.1 Theories about Origins of HIV/AIDS

The first theory: It states that the HIV has been among mankind for a very long period. Scientists theorize that the virus might have come from a small isolated ethnic group, which had acquired immunity to it. Therefore it rarely caused death among people in their community. When it spread outside that group and reached people who lacked such immunity, it became a killer disease. This theory is important for a key reason. If this was the origin of the HIV, then the isolated group’s knowledge of the immunity might enable a vaccine to be developed which may protect the rest of the world. There are a few completely isolated peoples left in the world. Some of them today are scattered in the rain forests of New Guinea, the Amazon, and perhaps Central Africa.25 Though it is very

25 GRACIOUS THOMS, GEORGE PEREIRA, HIV and Pastoral Care, CBCI Commission for Health, CBCI Center, 1, Ashok Place, New Delhi, 1999, p.27
difficult to disprove this theory, but there are scholars who do not subscribe to this view.

Second theory: This theory states that HIV recently evolved through the mutation of another human virus. According to this theory, viruses are continually changing and mutating into new strains. Hence it is possible that a mutation took place in a virus, which in turn produced a new virus with the deadly properties of HIV. Scientists do not accept this explanation because the characteristics of HIV do not match up well with other human viruses. With the increased migration of peoples, market economy, liberalization and expansion of global tourism industry, a lot of travel has taken place among people within and outside the country since the 1950s. As there has been an increased interaction between person/community with another person/community, it has facilitated the transmission of the disease.

Third Theory: There is a third and widely discussed theory. According to this theory the origins of HIV/AIDS stems from a related virus that infects certain types of African Monkeys. This virus recently infected humans. The process of a virus moving from an animal species to human beings is called Zoonosis and is known to occur for other viruses too. Hence this theory has given rise to the idea that the original

26 SETH C. KALICHMAN, Answering your questions about AIDS, A.I.T.B.S., Publishers & Distributors, India; Delhi, 1997, p-18
transmission from monkeys to human beings was via a sexual relationship. This explanation seems feasible because HIV is similar to viruses that infect monkeys living in some areas of Africa where HIV-1 is very common.\textsuperscript{27} It is to be noted that while medical researchers have not proposed this hypothesis, this has appeared as a kind of some scientific fiction in recent literature.

Paul Brown in his special article in \textit{The New Indian Express} has this to say about the origin of HIV: According to him till recently scientists were without clues as to the origins of HIV. It is now established that the origin is the Chimpanzee that carries the virus. A US team of scientists has claimed to have solved more than 20 years of puzzle of the origins of the ‘Acquired Immunodeficiency Syndrome’. The virus skipped from one species of the chimpanzee to another and later to human beings via the hunters who killed the chimpanzee for food.\textsuperscript{28} There are other examples of diseases ‘crossing over’ from animals to humans. Since a virus similar to HIV has been found in a species of monkeys, this hypothesis has received considerable attention. But in 1988, the scientists who thought that they had isolated a virus similar to HIV, from wild African

\textsuperscript{27} \textit{Ibid}

\textsuperscript{28} PAUL BROWN, \textit{in The New Indian Express}, Bangalore, Feb, 2 – 1999, P.19
green monkeys, later announced that they had committed an error! 29

**Fourth Theory:** This fourth theory is about a man-made virus. Some researchers believe that the virus was developed from a germ warfare laboratory. But this theory has no scientific foundation. Rather it has been propagated like a rumor campaign with different versions. It is very difficult to prove the germ warfare theory. In the first place genetic engineering was not sufficiently advanced to develop such a man made virus at the time HIV first appeared in the mid fifties. The second argument against such a theory is that a Virus like HIV is not the sort, a germ warfare laboratory would wish to develop, unless one’s own side can be protected against it! So far there is no substantial evidence to prove this theory. 30

1.1.3 **First Cases of AIDS**

It was in the spring of 1981 that the first cases of AIDS were documented. The Center for Disease Control and Prevention (CDC) in USA reported on June 5, 1982 that 5 young previously healthy homosexual men in Los Angeles were sick with a rare disease. It was a rare type of pneumonia, *Pneumocystis Carinii Pneumonia*. Then a month or so later, on

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29 GRACIOUS THOMAS, HIV and Pastoral Care, CBCI Commission for Health, CBCI Center, 1, Ashok Place, New Delhi, 1999, p.27
30 *Ibid*, p. 29
July 3, another 20 men with the same type of pneumonia and 26 men with *Kaposis Sarkoma*, a rare form of skin cancer were also reported by the CDC. Such cases occurred in New York City, San Francisco and Los Angeles. The affected were previously healthy young homosexual men. Soon the epidemic became a part of American Society. From there it spread quickly to Europe, Africa and the Asian countries. Today Asia is the greatest killer of people with AIDS around the world.

### 1.1.4 Nature of HIV

HIV is a virus. All viruses have some important characteristics in common. Viruses are very tiny; hence it is difficult to see a virus even with the most powerful microscope. A virus consists of genetic materials, (DNA or RNA) encased within a protective covering. A virus is not a cell. It does not have the essential parts of living cells. That is why a virus is best described as something between an inanimate object and a living cell. Viruses invade human cells and take control of the cells to produce more viruses using the cells’ own resources. In this process these viruses kill the human defense cells.\(^{31}\)

### 1.1.5 HIV – A *Retrovirus* / A *Lentivirus*

HIV is an unusual virus. It is a ‘retrovirus’, which means that its life cycle is the reversal of other virus-like cycles.

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\(^{31}\) SETH C. KALICHMAN, *Answering your Questions about AIDS*, AITBS Publishers, Delhi, 1997, p. 81
Hence it is far more complex than common viruses. HIV belongs to a group of retroviruses called ‘lentiviruses’ – *lenti* meaning slow in Latin. As its name implies, HIV progresses slowly to cause diseases over a long period of time – usually many years before symptoms appear. Since it is the infection of the immune system, the defense mechanism of the body cannot effectively fight HIV infection.32

1.1.6 TYPES OF HIV

Medical scientists have discovered two types of HIV. The first type of HIV is referred to as HIV type 1, or just HIV 1. This accounts for the majority of AIDS cases in the world, and almost all cases of AIDS in the USA. A second type of virus causing AIDS was discovered in 1986 and this is common to some areas of Eastern Africa. This type is called HIV 2. Both these are retroviruses and both cause AIDS.33

1.2 DESTRUCTION OF IMMUNE SYSTEM

God has given us a wonderful body. The popular saying is that, ‘Health is Wealth’. If we have to live happily, health is a must. The body’s immune system has to be always on guard. This system is the ‘Defense mechanism of the body.’ The immune system within our body functions like an army.

32 *Ibid*, p. 9
33 *Ibid*, p. 10
Usually an army consists of hundreds of thousands of soldiers. They keep vigil round the clock to safeguard and protect the country. Similarly our body consists of special blood cells. These blood cells fight off the germs that enter our body. Hence our body constantly keeps producing millions of blood cells. These blood cells are in fact part of our body’s immune system. Hence our body’s defense mechanism should be strong to fight any invading viruses into the body.

In normal circumstances when a bacterium or a virus enters our body and attacks the immune system, the white blood cells (‘WBC’) in the body would destroy these invaders! There are various types of WBCs that have particular assignments in the body. The WBCs that destroy the viruses are called ‘Phagocytes’. The other type of WBCs are called ‘Lymphocytes.’ These identify the invading viruses and destroy them.

The T4 Lymphocytes play a major role in the defense mechanism of the body. These are the defense cells of the immune system. To subdue the antigens produced by the virus, the T4 Lymphocytes produce antibodies in the blood stream. These antibodies destroy the infecting viruses. In this process specialized cells called ‘Lympho-kinase’ help the WBCs. In this orderly way the WBCs destroy the viruses and preserve a

\[^{34}\text{Ibid, p. 16}\]

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healthy body. The ‘memory cells’ of the $T4$ Lymphocytes record the characteristics of the invading viruses and their *antigens*. This will help the defense mechanism to identify, when later on the same viruses attack the body a second time. Now let us consider how the HIV destroys the defense mechanism of the body and thus paves the way for the onset of opportunistic infections in the body. The HIV is a clever enemy. It enters the body stealthily through different modes. It does not show any prominent outwards sign as it enters the body.

### 1.2.1 How does HIV infect blood?

The HIV enters the body mainly through four modes. The HIV is a unique virus. These viruses do not enter the body as enemies, but as friends! HIV infects certain WBCs namely, the $T4$ helper cells or $CD4$ cells. These play an important role in the defense of the body. $T4$ helper lymphocyte cells control many branches of the immune system. HIV attaches itself to the lymphocyte’s surface, an area called $CD4$, in order to gain entry. It covers itself with a protein shield, thus avoiding detection by the defense system of the body. Therefore the *Helper T-cells* are not able to send any warning signal to other special *T-cells* and *B-cells*. Hence the HIV hinders our immune system from protecting our body. Once the HIV has attacked our immune system, our defenses are weakened.
The HIV is unable to reproduce on its own. It occupies the nuclei of the healthy body cells and starts reproduction of its genes. In the size of a full stop (.) area there would be thousands of HIV! When the HIV is mature enough it bursts out of the T4 cells seeking other targets and kills the T4 cells in the process. Infected immune cells therefore lose their ability to control infections and diseases. As more and more T4 cells are destroyed, the body's defense system itself is destroyed. The virus infects more and more of the immune system until it no longer functions. The symptoms then begin to appear.

1.2.2 Mutation of HIV

Mutation is the specialty of the HIV. Mutations are genetic alterations and errors in the DNA that happen when cells and viruses reproduce themselves. In the case of normal viruses mutation does not cause problems. But in the case of HIV, mutations become a regular part in the existence of HIV! This virus mutates rapidly so as to develop into many strains or characteristics, each slightly different from the other. Because of this the virus is able to elude antibodies against the original strain. Of these, some strains cause diseases slowly and others quickly. Those rapidly destructive viruses are called Virulent strains. Virulent strains of HIV create major obstacles to

35 SETH C. KALICHMAN, Answering your Questions about AIDS, A.I.T.B.S., 1997 Delhi, pp 9 -10
treating HIV infections and finding a vaccine to prevent HIV infection.\textsuperscript{36}

\textbf{1:3 Stages and Symptoms}

Most individuals infected with HIV have no symptoms and feel well. But some of those who go on to develop AIDS have an illness that is virtually always fatal. The Center for Disease Control in Atlanta, U.S.A., classifies four stages or phases or even groups in a HIV infected person.\textsuperscript{37} HIV infection can be broken or divided into four stages or phases for easy understanding:

\textbf{1.3.1 Stage One}

The HIV enters the human body without revealing any obvious signs of entry. This phase one is known as the onset of infection. In about 2-8 weeks time the HIV establishes itself in the body. HIV causes genetically reprogrammed T helper cells to become Virus-producing factories, a process that ultimately leads to the death of infected cells. From the onset of infection to about 3-6 months time \textit{Anti-bodies} start developing and this time is called \textit{The Window Period}.

\textsuperscript{36} \textit{Ibid}, p. 13-14
\textsuperscript{37} R.H. THANGARAJ (ed), \textit{Medico - Pastoral Response to AIDS}, National Lutheran Health & Medical Board, Madras, 1991, pp. 4 -5
During the window period a few patients may develop transient measles or fever. Rash may also appear all over the body accompanied by fever, chills, sweats and persistent cough and tiredness. There may be some more minor infections. The patients may have diarrhea and loss of weight.\(^{38}\)

1.3.2 Stagé two

This stage is also named the Symptomatic period. There are hardly a few signs of illness. There are also no signs of the disease. During this time the HIV is slowly destroying the

\(^{38}\) SHANTHA KINGSTON, *Question of Survival: AIDS*, Turning Point, Madras 1993, p. 4
immune system. Stages two and three are also called *The Silent Stages*.\(^3^9\) During this period the infected person may look healthy and normal. He can attend to his daily routine. But he is highly infective and he could easily transmit the infection to others at this stage.

1.3.3 STAGE THREE

After a period of 1 to 10 years from the onset of HIV infection chronic symptoms start appearing in the person. During this period infected people may have swellings of all lymph glands of the body. These can be seen behind the ears in both the sides of the neck, the armpits and the groin. These will be about the size of grapes. This is the middle stage of HIV infection.

1.3.4 STAGE FOUR

This is the fourth and final stage in HIV infection. During this period a person infected with HIV will have lost completely the power of the immune system. Varieties of virus, bacteria, fungi and parasites infect all parts of his body. The body yields itself to various peculiar opportunistic infections and cancers. The patient will have difficulty in swallowing food due to infection of the throat, progressive loss

of sight and total blindness may occur due to *Cytomegalovirus* (CMV) infection of the eye.

In phase four, serious illness sets in and the patient is recognized as an AIDS victim. From the onset of HIV to the period when the virus has depleted the body’s defenses, it takes about 1 to 10 years time. In a full-blown AIDS case the HIV destroys helper T-lymphocytes and as a result the CD4 cell count drops from the normal 800-1000 cells per cubic millimeter of blood to 400-600 cells. In serious cases this count falls to 200 cells. This makes it easier for infections to set in.\(^40\)

### 1.4 Symptoms

Health is usually measured by the absence or presence of illness. The experience of the first symptoms ushers in the first sense of illness after a person has been infected with HIV. Suddenly there is a realization that the virus is taking its toll on the body’s ability to fight off diseases. The final stage of infection is called AIDS when the patient shows at least two major symptoms and one minor symptom.\(^41\)

#### 1.4.1 Major Symptoms

These are also called prominent symptoms. They are prominently noticeable and persist for a longer time. These

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\(^{40}\) What you must know about AIDS, in *The Week*, Aug 19, 2001 Kottayam, Kerala, p. 7

\(^{41}\) Ibid, p.12
symptoms indicate that HIV has set in on the person and that AIDS is not far off! Although HIV infection affects everybody differently, most people experience few symptoms for the first five to ten years of infection. For people who become ill but have not yet been tested, symptoms of HIV sound an alarm that usually brings about the desire of getting tested. Here below some of the major symptoms are enumerated. These are:

1.4.1.1 LOSS OF WEIGHT

As the immunity in the body is gradually reduced, the patient loses more than 10 per cent of his bodyweight within a month for no obvious reasons.

1.4.1.2 DIARRHEA

The patient will have persistent diarrhea for more than a month. No medicine seems to control the diarrhea.

1.4.1.3 FEVER

When the HIV infection is taking hold of the patients, intermittent fever may occur. It may continue for a whole month. After a month the fever disappears all of a sudden! The person feels healthy.
1.4.2 MINOR SYMPTOMS

During the latent or incubation period of the HIV in the body, there will be many common or minor symptoms. Such symptoms are enumerated here below:

1.4.2.1 THRUSH

In the early stages of AIDS, thrush a curd like substance will be seen in the mouth and tongue. The patient’s mouth may be severely affected and one will not be able to swallow food or drink water. This might even turn into cancer. The whole length of the food pipe might be blocked. Gradually this infection starting from the mouth will invade the food pipe and stomach.42

1.4.2.2 PNEUMONIA

A peculiar type of pneumonia is common in AIDS patients mostly in Western countries. It occurs when the CD4 cell counts falls to 200 and below. This infection is named *Pneumocystis Carinii Pneumonia*. It is the result of the opportunistic43 infection caused by the single celled organism

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42 SHANTHA KINGSTON, *Question of Survival: AIDS*, Turning Point, Madras, India 1993, p. 5-6
43 *Opportunistic infections* - these take advantage of the lost immune system of the body.
mentioned above. This will cause breathing difficulties and respiratory trouble.

1.4.2.3 Cancers

In the early stages peculiar kinds of cancers may appear in a HIV patient. There are different kinds of cancers. We can enumerate three main types of cancers:

Kaposis Sarcoma: This is a common cancer among the middle-aged men of Mediterranean or Eastern European descent. This manifests itself as blue or brown patches on the skin. It is also normally found among the homosexuals.

Non-Hodgkin’s Lymphoma: It is the disease of lymph nodes or enlarged or swollen glands. These may appear as swellings in the groin, neck and axillary (arm pits) parts. It is common for people with HIV infection to have this disease.

Cervical Cancer: It is caused by a variety of Viruses including HIV. Here HIV infects the cervical cells and alter their structure. Later this becomes cancerous and spreads to the other parts of the uterus.

1.4.2.4 Brain Damage

Faculties of the brain may suffer. There will be mental disorientation. Puss may be formed in the brain cells resulting
in abscess. A variety of brain diseases might pull the patient down further as the brain is infected.

1.4.2.5 BLINDNESS

In an infected person vision problems can result from any eye infection. The most common eye infection is due to CMV – Cyto Megalo Virus. CMV infects the retina when T helper lymphocytes are seriously depleted and the count falls below 50. The damage caused to the retina is irreparable. 44

1.4.2.6 OPPORTUNISTIC DISEASES

In addition to these prominent and general symptoms there are other infections that attack the patient when the HIV destroys the immune system. In all cases of infections there is the presence of the HIV.

- Paralysis
  
  Due to peculiar fungus infections in the brain various types of paralysis may appear.

- Neurological diseases
  
  With AIDS, disturbances in thinking and behavior can occur particularly at the later stages. There may be difficulty in

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44 SHANTHA KINGSTON, *Question of Survival: AIDS*, Turning Point, Madras, India 1993, P. 7
maintaining concentration, memory problems and motor disturbances – including movement problem in arms and legs.\textsuperscript{45} In severe cases, a person’s ability to work, care for oneself and have relationships gets impaired.

- **Candidiasis**

  *Candidiasis* is often the first sign of AIDS. The yeast called ‘Candida’ causes this. This is usually present in the mouth. This is also present in the digestive tract, vagina and skin. This infection appears in the mouth as white patches. It can also infect the skin, digestive tract and vagina causing itching, redness, burning and discharging. It can also affect the penis.\textsuperscript{46}

- Another opportunistic illness is meningitis. The fungus *Cryptococcus neoformans* causes it. This virus normally lives in birds and is found in the soil and air. It infects people whose CD 4 count falls below 200.

- **Herpes Simplex Viral Infection**

  This disease infects HIV people in a larger scale. Infected people with HIV can have long bouts of small, painful erupting blisters on their bodies. Although herpes blisters


\textsuperscript{46} What you must know about AIDS, in *The Week*, Aug 19, 2001 Kottayam, Kerala, p. 13
normally heal within 3-4 weeks, people with AIDS may have prolonged outbreaks that last months.

- **Histoplasmosis**
  
  This is another type of fungal infection. *Histoplasmosis* enters the body by inhaled fungus particles. This infection may possibly move to other parts of the body. Symptoms of this infection include fever, skin rashes, anemia and swollen lymph nodes.

- **Gastrointestinal infections**
  
  This infection is very common and prolonged among HIV positive people. The virus *Protozoan* causes this. It infects the digestive system, usually the small intestine. It causes chronic disabling and even deadly diarrhea. There would be abdominal cramps, pain, bloating, fever, weight loss and vomiting.\(^{47}\)

**CONCLUSION**

In this first chapter we have studied in depth the nature and origin of HIV and AIDS. AIDS is a dreadful disease. One who is infected with HIV has only a few years to live with prospects of death a painful agony and death. Up-to now the scientific

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fraternity has neither discovered a cure nor a preventive medicine. As the 14th International AIDS Conference at Barcelona ended in July 2002, new insights into this global pandemic have surfaced. Among them is the unmistakable conclusion that HIV/AIDS, even thought it has been scaring the world for the last two decades, yet it is in the early stages of its development.

Given this reality, playing the ostrich will help no one and no nation. Brazil and Thailand have taken the disease head on and they have reported the most promising break through in its successful management. India has to learn a lesson from these countries. In India an estimated 1 percent of the country’s adult population is living with HIV/AIDS. We cannot close our eyes to this serious threat. India should learn to strive to overcome this challenge.
CHAPTER 2

MODES OF HIV TRANSMISSION

INTRODUCTION

The absence of a cure for HIV/AIDS is a troubleshooting reality, because there are millions of people afflicted by this dreaded disease worldwide. It is feared that AIDS will surpass the ‘Black Death’ as the world’s worst pandemic, if the 41 Million or more people living with HIV/AIDS do not get life prolonging drugs.

AIDS has already killed 25 million people since early 1980s. An estimated 14,000 are infected each day with HIV worldwide! Without antiretroviral drugs most people living with AIDS will die, pushing the death toll beyond the 40 million mark of the Black Death! 48

48 BLACK DEATH – It is the Bubonic Plague of the 14th century, spread by rat-flea bites which infected and killed about 40 million people in Asia and parts of Europe.
In this chapter we shall enumerate the modes of HIV transmission so that awareness is created among the people moving to take precautions against the spread of HIV/AIDS.

2.1 THROUGH SEXUAL CONTACT

As early as 1990, the WHO had estimated that over 60% of all HIV infections worldwide were due to sexual contact. This contact may be oral and vaginal. In fact the WHO had estimated that by the year ending 2000 AD over 75% to 80% of all HIV infections worldwide including India would be acquired by sexual contact alone. But in India the rate is about 75%.

Sexual contact is the most common form of HIV transmission. The sexual contact can be divided into two categories; namely, hetero and homosexual contact. The HIV can live only in human blood, semen and vaginal fluids. The HIV cannot make a forced entry into the human body through the skin. Humans have very thin mucus membrane in the mouth, throat, eye, nose, stomach, intestine, anus, vagina and glance of the penis. As the HIV is present in the vaginal fluids, semen and blood; it can be transmitted through any means of sexual contact.

2.1.1 VAGINAL INTER-COURSE

The majority of people in the world with AIDS were infected with HIV through vaginal intercourse. In this process
infected semen or vaginal secretions come in contact with the blood or mucous membrane of the healthy person. For that matter most of the men who are HIV positive have received the infection through vaginal intercourse with infected women. Whether they were infected with HIV from sex, shooting up drugs, or a blood transfusion, a man or woman can infect their sexual partners during vaginal intercourse without the protection of latex condoms.

2.1.2 FROM WOMAN TO MAN

There are fluids that cover the mucous membranes of a HIV positive woman’s vagina. These fluids contain a sufficient amount of HIV to cause infection. Here the HIV can enter the man’s body through the urinary opening at the tip of the penis and also even through small scratches on the penis. Microscopic cuts or tears of the skin allow HIV to pass into the human body, as these viruses are very small.49

2.1.3 FROM MAN TO WOMAN

Most HIV positive women got the infection from having vaginal intercourse with an infected man. It is said that more than half of all women in the United States got their infection from intercourse with infected men. Vaginal intercourse with an

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HIV positive man deposits semen into the vagina, delivering a massive dose of HIV. Once inside the vagina there are many ways for the HIV to enter into the blood stream. HIV can gain access to a woman’s blood stream through small scratches on the surface of the vaginal lining.\textsuperscript{50}

\textbf{2.1.4 ENHANCED RISK THROUGH STD}

It must be noted that Sexually Transmitted Disease (STD) causes AIDS faster. A survey was conducted during 1991-93 and 1997-98 on 16,200 women in various districts of Tamil Nadu. The results revealed that 669 patients had STD and 1200 were in high risks groups with minor STD’s. On follow up in 1994-98, the HIV positive patients had died within 3 years. The truth is that individuals with STD like Gonorrhea, late genital HIV – 2 infections were infected with HIV faster than individuals without STD.\textsuperscript{51}

\textbf{2.2 THROUGH ANAL INTERCOURSE}

Anal intercourse refers to sexual penetration in which the penis enters the anal-rectal cavity. Anal intercourse facilitates HIV to enter human body. Anal intercourse is practiced both by

\begin{flushleft}\textsuperscript{50} \textit{Ibid}\end{flushleft}

\begin{flushleft}\textsuperscript{51} M. AYYAMUTHU, STD Causes AIDS Faster, in, \textit{Science Express, Bangalore}, Jan 12 1999, p.2\end{flushleft}
gay men (men to men) and heterosexual sex (men to women). This type of sex is very risky when one partner is HIV positive.

2.2.1 RISK IN ANAL INTERCOURSE

Anal intercourse with a HIV positive man to man, or man to woman carries greater risk for HIV infection than other sexual acts. There are many factors that make anal intercourse so risky. The walls of the anus and rectum are thin. They are richly supplied with blood vessels. This makes it relatively easy for tears and scratches during sexual penetration. Direct access of HIV infected semen to the blood stream and lymph nodes is allowed when rectal wall is damaged. Torn tissues in the rectum can also expose the penis to HIV infected blood. Therefore anal intercourse creates high risk for the both partners.\(^{52}\)

2.3 THROUGH ORAL SEX

This is a type of sexual contact where one partner uses one’s mouth to stimulate one’s partner’s genitals. Mouth-to-penis oral sex is considered risky for transmitting HIV, although it is substantially lower risk than vaginal or anal intercourse. Many adults practice this kind of sexual relationship. In oral sex or fellatio there is a possibility of HIV

\(^{52}\) SETH C. KALICHMAN, Answering your Questions about AIDS, A.I.T.B.S Publications, Delhi, 1997, p. 62-65
infection. There is a chance of infection in fellatio if there are scratches or wounds in the mouth or the genital organs and there is contact of the infected blood. However fellatio can be made safer either by using latex condoms or by avoiding contact between the mouth and head of the penis. The percentage of such infection is small.

2.3.1 **How much risky is Oral sex for HIV infection?**

During the oral sex the mouth and tongue come into contact with semen and vaginal fluids. As we are aware, the HIV is present in semen and vaginal fluids. When there are sores, cuts or other openings in the mouth, these allow easier access to HIV to the bloodstream.

2.3.1.1 **Does deep kissing pose danger?**

Next to hugging, perhaps, kissing is the most frequent form of intimate contact between people. Through kissing, many viruses are spread that cause colds, flu and other infections to the people involved. As of now all evidence shows that there are no known cases of HIV transmission from kissing. There is very little HIV in saliva, and there are chemicals and enzymes that damages HIV's protective envelope.  

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53 Ibid, p.75
2.4 By Artificial Insemination

Artificial insemination carries a sure risk. As a large amount of HIV is present in the infected semen, when it is inseminated into the womb, there is absolute risk! To help reduce this risk, donated semen is usually frozen and stored for several weeks. Later on a blood test of the donor will make sure whether the semen was infected at the time of donation. There are several sperm banks located in various parts of the country. The usual donors of sperm in the country are the poor laborers, beggars, or street vendors who make a living out of it. Many drug addicts also donate sperm for a price to buy drugs. There are also reports of students from professional colleges who donate sperm for making additional pocket money. Many women are forced to seek abortion when they learn the status of the semen donors. There are documented cases at least in some countries to show that HIV has been transmitted through artificial insemination.

Like the blood donation, semen donation has become a big business whose beneficiaries include sterilized men, people already infected with HIV and other deadly diseases including hepatitis B. In fact instead of reducing social and human problems, perhaps we are in the way to creating a new social

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54 CANADIAN MEDICAL ASSOCIATES JOURNAL, 146 (1992) 2,227-231
disorder with added problems and human sufferings. In other words, we are heading for a disastrous situation unless we change our lifestyle as well as our thought process.

2.5 Through Blood Transfusions

People need blood transfusions at the time of major surgical operation and also when they meet with accidents and when there is loss of blood. Nearly 50% of the blood needed is supplied by the commercial blood banks and the voluntary blood donors supply 50% of the blood needed. Blood Banks and blood donation were introduced in India in 1941. During this period the Second World War was in full swing. It became a war necessity to supply blood to the wounded soldiers. In 1941, the then Governor General of India directed all Provincial Governors to set up blood banks. These blood banks were to supply blood to the needy soldiers and civilians during the war period.

When large amount of HIV infected blood is transfused into the bloodstream, it causes massive dose of HIV infection into the immune system. Virtually every person who has had an HIV infected blood transfusion has become HIV infected. The medical fraternity recognized as early as 1980 that an unknown virus through blood transfusion had caused the infection. In 1985, the first test for detecting HIV antibodies become available and it was used immediately to screen all the donated
blood. HIV infected blood has caused, about one in every 20 HIV infections in the world, but only one in every 50 in the United States as the facilities for screening blood for HIV are better there.

Today there are over one thousand officially known blood banks in the country. In addition to these, there are also hundreds of unregistered or illegal blood banks spread across the country. The professional blood donors are those who sell their blood for a price. As they are usually very poor people, who do not have any other means of survival, and hence sell their blood frequently. There is a possibility that the blood of such people might be contaminated with HIV.

2.5.1 SITUATION IN INDIA

In India there is a ‘bloody mess’ in the blood donation business! The worst was that, the government failed to formulate rules and regulations regarding blood donation for nearly one and a half decades of the AIDS epidemic. Nearly 18% of the HIV infections were due to infected blood transfusion in India.\(^{55}\)

Though testing of every bottle of blood for HIV was made mandatory as far back as March 1, 1989, this statutory

\(^{55}\) HARINDER Baweja & Arun Katiyar, The Indian face of AIDS, in \textit{India Today}, 1992 Nov, p-94
requirement has not been fulfilled in the blood industry. As of November 1992, there were about 1018 blood collection centers in the country. Out of these the government run banks were about 600. In fact, the first HIV case reported in India was due to infected blood transfusion done in America in 1986. In India, collection of blood from professional donors has been banned and mandatory screening of blood is in force.

2.5.2 **THROUGH ORGAN TRANSPLANTATION**

Organs such as kidneys, liver, eyes, sperm, bone marrow, tissues and blood products from a person with HIV infection contains the virus. It can infect the recipients. That is why the same procedure used for screening donated blood should also be used for screening organ and tissue transplants.

2.6 **PRE-NATAL INFECTION**

Just as estimated by the WHO, the number of HIV infected children has already crossed over 10 million worldwide! By 1993 there were about 20,000 HIV infected children born in New York City alone! In this process of infection, HIV can cross the placenta in the womb itself. It can take place also during labor when the baby swallows amniotic fluid and

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56 By 1988, AIDS was number nine in the list of causes of death in United States for children from one to four years of age. (Report of United States Health and Human Service, Dec. 1988)
blood. The rate of infection from mother to fetus is, however very high because of the potential to exposure to large amounts of blood. It is estimated that 10% of the children born to infected mothers would get the infection and die within a year or two.\(^{57}\)

### 2.7 Infection Through Breast-Feeding

The passage of the Viruses through breast-feeding is unclear. Different studies suggest that one out of seven are affected with the virus due to the infected mother feeding the child. HIV has been found in mother’s milk. Cracks in breast nipples can also allow the mother’s blood to mix with her milk and as the mucous membranes of the infant are so delicate the virus might enter the blood vessel.

### 2.8 By Infected Surgical Instruments

In hospitals and nursing homes precaution should be taken to sterilize needles and syringes before using the same for another patient. If not, there is a risk for the patient.

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2.9 THROUGH INTRAVENOUS DRUG ABUSE

Sharing needles and other equipment to inject drug is a very intimate aspect of drug culture. It is common for blood to be drawn up into the syringe while shooting up, thus contaminating the entire syringe apparatus. Blood is present during injection when drugs are shot into the bloodstream as many drug addicts use the required dose from the same syringe.

HIV infected blood can pass directly from the bloodstream of one person to that of another. According to NACO about 6% of the infection take place in India this way.\(^\text{59}\)

2.10 BY OTHER INSTRUMENTS

In addition to the use of contaminated surgical instruments at hospitals and nursing homes, other instruments used at the barber’s shop, pilgrim’s centers and instruments of mass tattooing could cause HIV infection, if such instruments are not sterilized and are used to different people at a time.

2.10.1 CAN MOSQUITOES CARRY HIV ?

There has been no proof to show that HIV can be spread through insects and animals. The connection between HIV,

insects and animals has been confusing. There has been much
discussion about whether insects carry HIV from person to
insect to person; and whether animals can get and give HIV
infection. Mosquitoes can carry diseases that cause sickness and
death in humans, such as malaria and meningitis. In these cases
the mosquito is part of the life cycle of the disease and acts as a
natural carrier. It was once feared that insects that first bite an
infected person and then transmit the virus to others could
transmit HIV. The idea originated from the high rates of AIDS
found in Central Florida, where there is also an abundance of
mosquitoes. Despite early scares, studies have shown that HIV
does not complete its cycle in insect’s cells, making mosquitoes
an impossible carrier for HIV. Furthermore, the amount of
blood residue on a mosquito stinger is not sufficient for HIV
transmission; because insects *ingest* blood, not *inject* it! Studies
in areas with both high rates of AIDS and dense mosquito
populations, like Central Florida, have shown that HIV
infection is unrelated to mosquito bites because elderly people
and children do not have high rates of HIV infection even
though they suffer multiple mosquito bites.\(^a\)

2.11 THROUGH HEMOPHILIACS

Hemophilia is an inherited disease that causes
uncontrolled bleeding. Replacing the missing clotting factors,

\(^a\) SETH C KALICHMAN, *Answering Your Questions about AIDS*, A.I.T.B.S
Publishers and Distributors, Delhi 1997, p.135
such as factor VIII, can treat such ailments. In the early 80’s before test for HIV was available, more than half of all hemophiliacs in the USA became HIV infected. Hence only screening the blood for factor VIII is safe, as the blood is tested for the presence of HIV.

2.12 PEOPLE AT GREATER RISK OF INFECTION

It is well known that all those who are exposed to the HIV infection are at great risk of the disease, but the following are at greater risk:

- Persons with venereal (STD) diseases.
- Persons who receive untested blood and blood products such as Immuno Globins, Anti Rh serum etc.
- Commercial sex workers and prostitutes
- Those who share syringes and needles while injecting drugs, such as heroine.
- Doctors and nurses who treat the AIDS patients without taking proper precaution are at risk of getting the infection.

2.12.1 HOUSEWIVES: A HIGH RISK GROUP

On the face of it, it would appear that married women should not be at risk of contracting HIV infection. People assume that most married women have only one partner; the husband and
such women are not at risk. But it is not enough for one partner to be faithful, both the husband and the wife have to be faithful to each other. It happens very often that the husband by having sexual contact with the prostitutes and other infected women infects his wife as well.

There are various biological, anatomical, and socio-cultural reasons why women have ten times more chances of contracting an HIV infection than men. The semen contains a high viral load and it remains in the female genital tract for a longer period of time. Hence, if the husband is infected, this in itself puts a woman at higher risk.\(^6\)

2.13 Preventing AIDS

As of now the medical fraternity has been unable to find either a cure or a preventive vaccine against HIV/AIDS. But AIDS and HIV can be completely prevented by changing a few specific types of behaviors. ‘AIDS is not curable, but can be prevented,’ is the clarion call given by the medical scientists. Prevention seems to be the only and best way to protect oneself from the onslaught of the epidemic. The World Health Organization has said the following on World AIDS Day on December 1, 1991 and again in 1992: ‘The most effective way to prevent sexual transmission of HIV is to abstain, or for two

\(^6\) JAYASHREE RAMAKRISHNA, Housewives: A High Risk Group? in Namasthe, a Journal of the Pastoral Care.
people who are not infected to be faithful to each other. Alternatively, the correct use of a condom will reduce the risk significantly.\footnote{PATRICK DIXON, Quoted in The Truth About AIDS, Kingsway Publications, London 1994, p.168}

Preventing AIDS means preventing the HIV from entering the human body. The virus enters the body through infected blood, semen or vaginal fluids. So removing such a chance eliminates all risks for infection.

2.13.1 Safe Sex

The term ‘safe sex’ was invented for the AIDS epidemic. It refers to sexual relations that can protect a person from giving or getting the virus that causes AIDS. For sex to be truly safe, it must not carry any risk of contaminating blood, semen or vaginal fluids.\footnote{SETH C KALICHMAN, Answering Your Questions About AIDS, A.I.T.B.S publishers and distributors, Delhi,1997, p.202}

The following sexual acts are considered completely safe from HIV and from other sexually transmitted diseases. Such acts are- kissing and hugging, heavy petting, and masturbation with a partner and foreplay. In these sexual acts there is no mucous to membrane contact. Hence there is no chance of the HIV passing on the infection to the partner.
2.13.2 CONDOMS

Latex condoms are the only form of birth control that prevents the spread of sexually transmitted diseases, including HIV infection. When properly used condoms place a barrier between the infected body fluids and the sex partners. For this reason condoms are the universal symbol for preventing HIV infection. But no one can give a hundred percent guarantee for non-infection.

2.13.2.1 FEMALE CONDOMS

The female condom is made of a thin plastic material. It is a collapsible tube that is open at the one end, closes at the other end and conforms to the walls of the vagina. The sheath is inserted with the closed end placed into vagina. It is said that the female condom is useful in preventing HIV and also other sexually transmitted diseases.\(^6^3\)

2.13.3 AVOID INFECTED BLOOD TRANSFUSION

At the time of blood transfusion it must be checked so that the blood is free of HIV. It is also necessary that blood products and organs to be transplanted are free of HIV.

\(^{63}\) *Ibid*, p. 213
2.13.4 AVOID INFECTED SURGICAL INSTRUMENTS

To be on the safer side at hospitals and nursing homes one should insist on using disposable syringes and needles. One has to be aware of the instruments used for nose, ears and for tattooing. These should not be used for another person without properly sterilizing them. Those who shoot up drugs should use sterile needles and syringes and these should not be shared. In our hospitals and nursing homes there is a lot of apathy and indifference and this is the cause for infection.

2.13.5 INFECTED MOTHERS SHOULD NOT CONCEIVE

Infected mothers are sure to pass on this HIV infection to their offspring. Hence it is strongly advised that these mothers should not conceive in order not to bring forth infected infants. Already a large number of children below the age of 15 have got the infection. They received this infection either from their mothers or from infected blood transfusion in infancy.

2.14 DISPELLING AIDS PHOBIA

People are ignorant about of the causes of AIDS. Some viruses and bacteria can spread from person to object and to person. Fortunately, it is impossible to transmit HIV by way of objects unless blood is present on these objects. Thus AIDS is not contagious as some diseases are; there is absolutely no
danger in working or living with the patients with AIDS in the same house. It is the lack of proper perspective and awareness programs which have resulted in constructing myths and stories about AIDS in India as elsewhere.\textsuperscript{64}

Thanks to the recent research findings, many facts about the HIV have come to light. This virus was initially believed to be contagious. But it is not true. All the available evidence indicates this virus cannot be spread by casual means and it spreads only in the ways already outlined. The virus is present in a very small quantity in saliva and does not spread even when a lip to lip kissing takes place.\textsuperscript{65}

HIV is one of the most fragile viruses known. It dies within 30 minutes of exposure outside the human body or at temperatures above 56 degrees centigrade. Here below are given some facts which will dispel the fear of HIV:

Standing close to someone with AIDS cannot infect one, because HIV cannot travel through the air.

- Coughing and sneezing do not cause AIDS, HIV is not airborne.
- HIV does not spread through water and food.

\textsuperscript{64} SHANTHA KINGSTON, \textit{Question of Survival: AIDS}, Turning Point, Chennai, 1993, p.18
• It is not transmitted through touching, embracing or kissing.
• Using the same toilet seat is not harmful.
• Mosquitoes and other insects do not carry or transmit the virus.
• Using the same utensils, bed sheets, furniture, books, and musical instruments will not transmit the infection.
• Casual contacts with the AIDS patients, shaking hands, petting, touching, sharing food, make-up, towels etc., will not affect one.

Awareness is the key to prevention. There should be massive educational programs for the people. In this way AIDS phobia would be repelled and people at large would be educated in a proper way.

2.15 Identifying the HIV

There is no other way than to undergo a HIV blood test to know if one has the infection. AIDS was first diagnosed in 1981. At that time doctors did not know what was causing the immune system of the body to break down so as to cause AIDS. It was only in 1983 that HIV was identified. The first test for HIV was developed in 1985. Today HIV testing is considered one of the cornerstones of international efforts to stop AIDS.
HIV testing determines if a person has been exposed to the virus that causes AIDS.

2.15.1 THE AIDS TEST

AIDS is the end-stage of the disease of HIV infection. An AIDS patient is the one whose immunity system is completely destroyed and he has no more chance of recovering health. AIDS is therefore a medical diagnosis based on the symptoms of infection, cancers or immune suppression.⁶⁶ For a person to be diagnosed with AIDS, he must also have HIV infection which is determined only by HIV testing.

2.15.1.1 THE HIV TEST

The HIV test examines a person’s blood for reactions to having been exposed to the virus. Some tests for HIV infection involve detecting the virus directly in the bloodstream. However such tests are very expensive and require special laboratories. The most widely used tests for HIV infections search for antibodies to the virus rather than the presence of the HIV itself.⁶⁷ The capacity to confirm infection was greatly enhanced during 1985 with the approval of a blood testing process called enzyme-linked immunosorbent assay (ELISA)

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⁶⁶ SETH C KALICHMANN, Answering Your Questions about AIDS, A.I.T.B.S. Publishers and Distributors, Delhi, 1997, p.140
⁶⁷ Ibid, p.141.
This relatively simple and inexpensive test was developed to screen donated blood for antibodies to HIV, thus reducing the risk of infection by transfusion or use of blood products.

2.15.1.2 THE 'ELISA TEST'

Blood drawn for HIV test is first screened for HIV antibodies. In this test an enzyme linked immunosorbent assay (Elisa) is used. ELISA is one of several techniques available for testing antibodies. The Elisa test is done first because it is sensitive to HIV antibodies—if there are HIV antibodies present, the Elise test is likely to detect them. Positive Elisa tests are always repeated because the tests can mistakenly pick up on non-HIV antibodies. Elisa test are unlikely to let infected blood sneak by. If the test is negative, it means that the tested blood does not have a sufficient level of HIV antibodies to activate the test. A person may, nevertheless be infected. With the ELISA test, it could be possible to determine the actual incidence of infection in the population, but public health authorities have decided against universal testing.67B

2.15.1.3 THE ‘WESTERN BLOT’ TESTS

Western Blot Tests are also used for diagnosing HIV antibodies in the blood. This technique determines the exact

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67B EARL E SHELP and RONALD H.SUNDERLAND, AIDS and the Church: The Second Decade, John Knox Press, Louisville, Kentucky, 1992, p.54
antigens, or parts of the HIV, against which antibodies have been targeted. Western blot specifically tests for the presence of antibodies against three groups that are part of the HIV protective layers. There must be at least two of the three antibodies present for a positive ‘Western Blot’ test. Detection of antibodies against certain viral proteins makes the Western Blot test specific to HIV.  

2.15.1.4 THE PCR TEST

The Polymerase Chain Reaction (PCR) tests were first developed in the late 1980s and these are used to diagnose many diseases. PCR allows small bits of genetic material to be amplified so that they can be identified as belonging to a specific type of virus. Since PCR can detect even a small fragment of genetic material, it is one of the most sensitive tests for HIV infection.

2.15.1.5 THE P-24 ANTIGEN TEST

The P-24 antigen test is similar to the ELISA test. In Elisa test antibodies against HIV are tested, but in this test of P-24 a protein found in the core of the HIV is detected. This test is done on a person’s blood plasma or other body tissues. The HIV proteins like P-24 are found in the bloodstream at all

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68 SETH C KALICHMANN, Answering Your Questions about AIDS, A.I.T.B.S. Publishers and Distributors, Delhi, 1997, p.140
stages of HIV infection, but are in abundance in the early stages and later stages of the infection.

Here is the diagram showing how the HIV enters into a human being: Once the HIV enters into the human being, it will remain and multiply there, thus endangering the life of that person.

**Entry of HIV in a healthy person**
- Entry into the blood
- Incubation (2 weeks to 3 months)

**Production of antigens**
- **ELISA Test** (Standard Screening Test)
- **Western Blot Test** (Confirming Test)

**Result: Positive**
Person: HIV Positive

Gradual destruction of immuno defense begins

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**2.16 TREATMENT FOR HIV/AIDS**

For AIDS there is no cure.

There is a saying in English: 'Prevention is better than cure'. This saying might be applicable to all the diseases, but in a very special way to AIDS for which there is no cure. Once the HIV gets into the human blood stream, death is sure to follow.
Hopes for a vaccine against AIDS suffered a setback at the 12th World AIDS’ Conference in July 1988. Researchers reported that a vaccine made from a weakened simian virus and injected into monkeys has caused the disease it was designed to prevent!\(^9\). Hence the failure of the vaccine trial has dampened the spirits of scientists. Dr. Ruth Ruprecht, a scientist at the ‘Dana Farba Cancer Institute’, in Boston the USA, presented the new findings. Once AIDS sets in, one can hope to live for only six months to two years. Though there is no cure for HIV/AIDS, antiviral drugs are available in developed countries. These drugs control the virus and progression of HIV.

2.16.1 TREATMENTS WITH AZT

The first drug approved to treat HIV infection was AZT, called Azidothymidine. This drug was originally developed in the 1960s to treat viral infections in animals. AZT is a medication that specifically targets the activity of retroviruses, including HIV. AZT interferes with the process by which HIV reproduces itself. The specific target of AZT is reverse transcriptase, an enzyme that is necessary for producing more HIV. The AZT increases the number of T-helper lymphocyte cells a person has, and improves the general health of people infected with HIV.\(^0\) Though initially AZT showed signs of

\(^0\) SETH C KALICHMANN, Answering Your Questions About AIDS, A.I.T.B.S. Publishers, Delhi, p.166
benefit to those with AIDS, the results of a larger and longer study was disappointing. It suggested that there was no long-term benefit in those who have early HIV infection.\textsuperscript{71}

2.16.2 TREATMENT WITH OTHER DRUGS

The results of AZT are confused and contradictory in early stages. In addition to AZT, there are a number of other anti-HIV drugs available, such as example, Dideoxycytidine (DDC), Dideoxyinosine (DDI) that are all medications that work similarly to AZT.

Since viral resistance develops quite quickly these drugs have only limited benefit. Meanwhile more research is needed. In the meantime, the emphasis is shifting to a multi-drug approach.\textsuperscript{72} The drug AZT has to be imported and it costs about Rs.300,000 a year. If the patient suffers CMV infection of the eyes, in order to save the eyesight he has to spend another Rupees six to seven hundred thousands! Who can afford to pay such a bill?

2.16.3 HOW DO TREATMENTS WORK FOR HIV?

Any treatment for HIV is not able to remove the virus entirely from the body. Instead the drugs work to stop or slow

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\textsuperscript{71} PATRICK DIXON, \textit{The Truth About AIDS}, Kingsway Publications, Eastbourne,
England, p.154
\textsuperscript{72} Ibid
\end{flushright}
down the reproduction of HIV. Different drugs have different ways of working. These drugs have one same goal: slowing or stopping new cells from being infected with HIV. However anti-HIV medications cannot remove the HIV from the cell once they have been infected.\textsuperscript{73}

\textbf{2.16.4 PROBLEMS IN DEVELOPING A VACCINE}

Long back in 1996 itself AIDS researchers cracked open the HIV's eggshell- a protein coating that protects the virus's genes from the outside world. With this achievement the scientists say that the make up of the AIDS virus has finally been deciphered- the protective coating was the last one. If the protective coating is isolated and treated with drugs, then controlling the HIV would be easier, say researchers.\textsuperscript{74} But will it be possible in the near future? So far we do not see any success in this field.

\textbf{2.16.5 ARE RESEARCHES ANY CLOSER TO A CURE FOR HIV?}

Even as there is no cure or preventive vaccine for HIV/AIDS, anti-viral drugs are available in the developed countries. But these drugs do not completely cure or eradicate the virus. They control the virus and progression of HIV. As

\textsuperscript{73} SETH C KALICHMANN, \textit{Answering Your Questions About AIDS}, A.I.T.B.S. Publishers, Delhi, ,1997, p.167

\textsuperscript{74} Researchers crack open the HIV's protective shell, in \textit{Indian Express}, July 13, 1996, p.11
of now we are uncertain whether there will even be a single treatment that rids the body of HIV.

There are two rays of hope against AIDS epidemic. First, it is possible to prevent HIV infection, by taking action against the virus entering the body. Second, for people who are already infected, there are constantly new treatments that are shown to slow down the virus. There are impressive advances in treatments for the secondary infections and cancers. Hence there is much more hope for people infected with HIV today than there was in the past, and there is more hope for the future.\textsuperscript{75}

CONCLUSION

In this chapter we have made an intensive study on the modes of HIV transmission and on the ways to prevent the spread of AIDS, preventive measures and on treatment of AIDS/HIV patients. We have studied the importance of awareness in this chapter. We have also studied how to diagnose HIV through various tests. As there is neither a cure nor a preventive vaccine against AIDS, knowledge of the disease and the knowledge of the means to prevent it is necessary.

\textsuperscript{75} SETH C KALICHMAN, \textit{Answering your Questions About AIDS}, A.I.T.B.S., Publishers, Delhi-, 1997, p.171
Failure to invent a vaccine either to prevent or to cure an AIDS patient should not dampen the spirit of research. The research should go on. Meanwhile both the society at large and the NGO’s and the Church in particular should spread awareness everywhere about AIDS. However we should bear in mind that information about AIDS is increasing rapidly. More has been learnt about AIDS in a short period of time than about any other disease in history. Now we know a lot about AIDS, and it is our goal to share this information by answering many questions through the research work.
Chapter 3

AIDS: SOCIAL AND ETHICAL REPERCUSSIONS

INTRODUCTION

HIV/AIDS is a global epidemic / pandemic. Increasing numbers of people all over the world are falling sick, suffering physically, psychologically, emotionally and spiritually in abandonment and isolation. Everyone must recognize his /her responsibility towards the welfare of those struck by AIDS. This is the need of the hour. The dreaded disease AIDS has been slowly gaining ground. Its repercussions on society are devastating. The UNO had declared that the world should try its best to usher in ‘health for all’ by the year 2000. But this has remained only a dream. AIDS has taken its toll. AIDS is waiting in the wings like a demon to devour everybody on its path!  

The absence of a cure for HIV/AIDS is a troubling reality because there are millions of people afflicted by this dreaded

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76 Ibid, p.150
disease worldwide. Perhaps the most controversial fact of the HIV/AIDS epidemic is the way in which our society treats people suffering from the disease and those who fall into the ‘high risk group’. There is lack of general knowledge about HIV/AIDS, combined with widespread myths and misconceptions. Due of this trend, the society treats the infected persons as outcasts. But the infected persons and their families are shunned by their friends and fired by their employees. These often disown HIV positive individuals. 77

In this chapter we shall study the social, ethical and moral repercussions brought about by the diseases AIDS. We shall also study how the people with AIDS are isolated and discriminated against. This attitude is against civil and natural laws. The society at large is faced with a dilemma due to AIDS. It has to give up certain human and ethical values hither to considered being sacred. All need to examine some social and other repercussions that disturb the peace of the society.

3.1 AIDS And Economic Growth

In a family the youth play a major role. They are the bread earners of the family. The children and the elderly live under their care. Unfortunately it is the youth who are the first victims of AIDS. The WHO estimates that about 8,500 youth

77 In, Namasthe- A Journal of Pastoral Care, Carmelaram, Bangalore 35, Vol. 7, October 1999
aged 15–30 years get HIV infection everyday, that is six people every minute! In the Asian countries and in the Pacific 700,000 young people get infected every year. Hence AIDS is a dreadful disease especially for adults. It is these adults who earn and support the families. Due to AIDS the economic growth of the family and through them of the country is curtailed. Thus AIDS has put a full stop to the all round growth of family, the society and the whole country.

The Global Fight against HIV/AIDS curtails the effectiveness of the fight against poverty. It is the Asiatic and African developing countries that will experience the scourge of the epidemic as the greatest hindrance to their economic growth and all round development. This means there is a subtle relationship between HIV/AIDS and poverty. We can take a look at the various facets of poverty that are directly related to HIV/AIDS.

. Poverty and vulnerability to HIV infection: The poor are generally weak due to low nutritional status. The immune system is already weak; hence the ability to resist exposure to HIV is reduced.

. Poverty and Health facilities: The poor are not able to access general health services nor are they likely to receive prompt treatment for various sicknesses. In the case of HIV

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infection it is obvious that the poor may not even receive attention.

. Poverty and Education: The opportunities of the poor for education and other social benefits are fewer. Hence their ignorance may deprive them of the awareness needed to counter the risks of HIV/AIDS.

. Poverty increases HIV vulnerability, HIV increases poverty: When HIV strikes, it rewinds the clock of the family as it loses the wage earners, reduces family’s ability to engage in small holding or in agricultural work. HIV also aggravates poverty through the reduction of employment opportunities as industry adjusts to its impact, the decline in economic growth because of the loss of skilled human resources and the use of available resources for consumption rather than investment.

3.1.1 SITUATION IN AFRICA

Laurie Garret the staff writer of the United Nations AIDS programs has filed this report: 78 Many countries, especially of the African continent have entered into a phase to social and economic destruction due to the global AIDS epidemic. This is a report released by the United Nations AIDS programs in

Geneva. It is said that the world is ‘Waking up to devastation and catastrophe’. The report shows that the epidemic in many nations – particularly in sub-Saharan Africa – has reached such extreme proportions that it is unlikely that economics, industries or public infrastructures would be able to recover for generations to come, even if the spread of HIV ceased today!

‘Sub-Saharan Africa remains the hardest hit’, said UN AIDS executive director Dr. Peter Piot in a Geneva press conference. ‘We have now 16 countries of that region in which more than one out of ten adults is infected with HIV. And in seven countries at best one out of five in living with HIV’. The hardest hit country is Botswana. Here 35 percent of adults aged 15 to 49 are now infected. According to UN AIDS two thirds of all children now aged 15 will eventually die of AIDS in a few years. According Dr. Peter Piot “AIDS is now really a development crisis”.

Dr. Peter Piot has much more to say about the problem of AIDS. He says that malnutrition is one of the major clinical manifestations resulting from HIV infection both in children and adults. At the socio-economic level food insecurity is a major cause of vulnerability to HIV. The impact of HIV is felt in reduced agricultural production as well as in increased

\[ \text{\textsuperscript{79}} \text{Ibid} \]
fragility of affected householders. Dr. Peter Piot proposes seven key challenges to turn back the epidemic. These are:

1. To make sure that emergencies are the focus for intervention to reduce HIV risk.
2. To break the vicious circle between food insecurity and HIV infection.
3. Need to assess the impact on rural development due to the spread of HIV.
4. To deliver essential HIV care and nutrition is a part of any essential care package.
5. Advice on avoidance of all breast-feeding by HIV infected mothers when replacement feeding is acceptable, feasible affordable, sustainable and safe.
6. Remove the stigma and discrimination against people living with HIV/AIDS.
7. To stem the tide of HIV/AIDS, the above mentioned challenges have to be faced and countered.

3.2 AIDS: AGRICULTURE AND INDUSTRY

Agriculture and farming play an important role in the economic development of a family and thus of the country. Of the 30 million people already infected with HIV throughout the world, more than 18 million are adults of working age. Thus AIDS is certain to have effects in workplaces and in economic life. This is particularly so in developing countries, including
India where the majority of HIV infected people live. Hence AIDS reduces the benefits of investment in training for work and social growth. There is lack of labor force and recourses to develop agriculture and industry.

3.2.1 AIDS AND FARMING

In the United States, Europe and even in Asia the repercussions of the AIDS epidemic are manageable. This might be even minimal for the society as a whole. But this is not so in the Sub-Saharan regions of Africa, UN AIDS Society says. Here the epidemic is causing severe damage to farming and other trades. There is still a relative lack of information about the potential effects of AIDS on farming. This is due to an early perception that ‘AIDS is an urban problem’ and that the rural labor pool is inexhaustible. But this is a wrong hypothesis. Very soon Indian families too will suffer, as do other nations. There is so much of urbanization that people have been moving from the villages to the towns and cities and there is a lot of chance for infection to spread.

3.2.1.1 INDIA’S FUTURE INFECTED BY AIDS!

Youth are often described as the backbone and future hope of our nation. We can imagine what will happen to a

nation if the deadly virus HIV, infects its future generation. Half of all HIV infected people on the globe are below 25 years of age. In India the current available data indicates that the youth will increasingly be at the center of the epidemic both in terms of transmission and impact of HIV/AIDS. Children and youth in all socio-economic groups in the country are vulnerable to HIV infection.  

According to UNAIDS report, the youth are sexually active before marriage and outside marriage too. A study of unmarried urban College students of low socio-economic status in Mumbai has revealed that 26% of the boys and about 3% of the girls had engaged in pre-marital sex. Another survey conducted in several colleges revealed that of the 430 students, of them 13% between 12-15 years of age had sexual experience. Of these 75% had more than one sexual partner. Another study conducted in the slums of Chennai (Madras) found that 80% of youth engaged in pre-marital sex, 85% of them never used condom. Hence unless the Government and the non-governmental organizations mounted an awareness program through the communication media as well as through schools and Colleges, India’s future will surely be overtaken by HIV/AIDS pandemic!

81 NARAYANKAR B.D, India’s Future is Infected by AIDS: United Nation’s Report, in The New Indian Express, Bangalore, December 29, 2001
82 Ibid
3.3 AIDS: Problem of Orphan Children

‘Our children are our future’, thus goes the saying. This is an important and basic statement about children. But children are much more than that. Children represent continuity for a family. They link us to our ancestors and to grandchildren who live the life of ancestors for future generation. At the end of life children mourn our death and ensure that we are buried—or cremated—according to the custom. Since the beginning of the epidemic of AIDS over a decade ago, it is reported that there are 10 million AIDS orphans of which there are about 8 millions in the Sub-Saharan region alone. This region is considered as the epicenter of AIDS. By the end of 2000, 10.4 million African children under 15 lost their mother or both parents to AIDS. This is 90% of the global total of AIDS orphans.

The orphaned children anywhere are a problem to society. Their growth and development is intimately affected by the absence and lack of a father’s care and a mother’s love. Fortunately, till today orphaned children form just a small percentage of the general population outside the time and the regions of world wars. But the orphans caused by the pandemic HIV/AIDS, is a massive phenomenon occurring on an

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84 JEFFREY BARTHOLET, The Plague Years, in Newsweek, New York, January 17, 2000, p.10
unprecedented scale in the sub-Saharan Africa and threatening many regions in Asia and particularly in India.

In the coming years India will have huge population of HIV positive children. It is one thing for the children to be orphans without HIV infection and it is another thing to be orphans and be HIV positive too! The life of the latter will be one of sorrow, loneliness, suffering and abandonment and possibly of rebellion and resentment. How will the society cope up with this problem? What will be the response of the Church and religious organizations in general?

In Chennai, erstwhile Madras for instance, there are only two organizations that take care of such children. The one is 'Community Health and Education Society' (CHES) and the other is 'Udaum Karangal' which means helping hands. Very often one is not able to rehabilitate children of HIV positive parents in some home meant for them. For instance there were two infected children from Andra Pradhesh. They were refused admission in the home meant for HIV victims in Chennai.

3.3.1 CHILDREN WITH HIV/AIDS

Here we need to distinguish between children who are infected with HIV only and the much larger number of children

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of these affected by AIDS itself. Children can be infected with HIV during pregnancy or during delivery. The risk of infection from a sero-positive African mother is 30% on average, babies conceived or carried soon after a woman acquires HIV, or when her health is failing, have the greatest risk of becoming HIV infected.

HIV infected orphan children need the greatest care. Here the government, NGOs and the Church have to play a greater role. The pastoral care of a HIV infected child requires the pastoral care of an entire family. An infected baby strains the resources of any parent and when there is the stigma of AIDS, then there is no more rejoicing over the child in the family. Much is to be discussed in the fourth chapter when we deal with the pastoral care of the HIV/AIDS victims. In India alone there are thousands of orphan children who are at the mercy of Church and society. A lot has been done to alleviate the sufferings of such children.

3.3.1.2 AIDS AND EDUCATION

The UN Executive director Dr. Peter Piot has this to say about the educational conditions in the Sub-Saharan regions. While analyzing the social repercussions due to HIV/AIDS, he
says, “consider the example of education: the epidemic is killing the teachers well before they reach retirement age.”

In 1998, Zambia lost almost as many teachers to AIDS as it trained that year. The nation has been unable to train new teachers fast enough to replace those who are dead or are forced to retirement by AIDS. Across Africa school systems are operating on less revenue as AIDS-beleaguered families are unable to pay their children’s fees. And there are now about 30 million youngsters who have lost one or both parents to AIDS. These have no money to pay as school fees.

If awareness were not created to prevent the spread of HIV/AIDS in India, we would not lag far behind from the loss of AIDS related social evils and repercussions. India has about 200,000 orphan children and most of them are infected with HIV/AIDS. The children are denied the fruits of education. Here is a heart-rending example: There seems to be no end to the woes of two hapless HIV-infected children, Bency and Benson, as most parents and locals are firm in their opposition to the presence of the siblings in a lower primary school near Kollam in Kerala. In fact they were removed from the school earlier and readmitted at the intervention of Chief Minister A. K. Antony in February 2003. A meeting of parents, elected

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86 Dr. PETER PIOT, UN AIDS Conference, held in Geneva, on June 28, 2000
87 Woes of HIV-Infected Children, in The New Indian Express, Bangalore, March 5, 2003, p.7
representatives from the area and social workers convened by the district administration on the previous day to settle the vexed issue failed to reach a decision and get the school reopened after it was closed last week in the face of local resistance against the siblings sharing class rooms with other pupils.

As a solution faded, Education Secretary Mara Pandyan who attended the meeting, said that he would report the outcome to the Chief Minister and Education Minister. While representatives of some NGOs, including those from the Belgian body One Foundation, tried their best to explain to the agitated parents that the two siblings’ presence posed no threat to others, most parents held that they sympathized with the poor siblings but they feared the dreaded disease more!

Unable to convince the parents about the need to have education for the HIV/AIDS children along with the other children, the state government of Kerala decided to start special schools to HIV positive children! Enraged at the decision of the Kerala government, a public interest petition challenging the decision of the government has been filed in the state high court. According to AIDS prevention Society, Kochi, the decision to start special schools will mean discrimination against students who are HIV positive. It will create groundless fear among the people.
The society therefore wants the court to direct the state to take steps to create awareness among the students, teachers and the public regarding the infection and prevention of HIV. It also wants the two students, who were ousted from the government school on the grounds of AIDS, be allowed to study in the same school.88

3.4 AIDS AND REDUCTION IN LIFE EXPECTANCY

‘As the 21st century approaches, the world is growing rapidly aging; couple are having fewer children and land; AIDS is taking such a devastating toll’, says a U.N. study on population estimates.89 According to the U.N. Figures, 91% of AIDS deaths occurred in 34 countries, 29% in Sub-Saharan region alone. Children born today in these 29 countries will have an average life expectancy of 47 years rather then 54 years had there not been AIDS epidemic.

Here below is a chart that shows life expectancy in some of the epidemic’s hot zone countries: 90 This chart shows how the people without the HIV infection could live much longer than people with the infection. The highest life expectancy to Botswana people is 70 years, but with HIV?

88 Special School for HIV positive kids challenged, in The New Indian Express, March 30, 2003, p.9
90 JEFFREY BARTHOLET, The Plague years in, Newsweek, Jan, 17, 2000, p.13
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<tr>
<td>Botswana</td>
<td>41 years</td>
<td>70 years</td>
<td>14.27</td>
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<tr>
<td>Kenya</td>
<td>48 years</td>
<td>66 years</td>
<td>13.43</td>
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<td>Malawi</td>
<td>40 years</td>
<td>53 years</td>
<td>8.94</td>
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<td>Mozambique</td>
<td>38 years</td>
<td>64 years</td>
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<td>Namibia</td>
<td>41 years</td>
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<td>Rwanda</td>
<td>41 years</td>
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<td>S.Africa</td>
<td>47 years</td>
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<td>Zambia</td>
<td>42 years</td>
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<td>Zimbabwe</td>
<td>41 years</td>
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The U.N. Studies further state that by 2010-2015 A.D., the average life expectancy at birth in these countries could only be 47 years. But in the absence of AIDS the life expectancy would be 63 years. Thus AIDS has disturbed the peace of the society and the repercussions will be seen for a long time to come.

### 3.5 AIDS AND PROBLEM OF QUACK DOCTORS

As the disease is spreading unchecked, quack doctors promising instant cure to patients with AIDS are on the increase. They fleece the unsuspecting patients of thousands of
rupees. It has been so wherever the epidemic has been more active.

A lot of doctors try to exploit the fears of patients by selling all kinds of remedies or treatments. AIDS patients before spending their savings on such remedies should remember that every folk remedy they hear about has already been examined and rejected by scientists or is as yet unproven. Many people have wasted a lot of money on treatments that are totally worthless.

Here in India we have many quack doctors who promise AIDS patients complete cure! Take for example the ‘AIDS Care Center’ of Dr. S.K. Arora of Chennai (Madras). For many years now patients with AIDS including M.Ps, M.L.As, ministers, film personalities and many others have been flocking to this AIDS center. Dr. Arora’s ‘shoot at site’ treatment ranges from Rs.20,000 to Rs.30,000. ‘It is better to inject the medicine to where the HIV is concentrated most,’ says Dr. Arora, ‘I inject the medicine to the penis and the testicles, as the HIV is concentrated most in these parts!’ he concludes with a sense of pride.

There is another clinic called, ‘AIDS Health Center’ run by M.Sabhapathy in Chennai. ‘I am able to cure anybody

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92 In, India Today, Living Media, Bombay, Dec. 12, 1994, p.10
suffering with AIDS within 15 days’, assures the doctor. He charges Rs.5,000 for his so called Ayurvedic medicine. Here in Chennai there are some more quacks that promise complete cure for fees of upto Rs.100,000. There are more then 50 such doctors who promise a cure to patients with AIDS and collect huge amounts of money from them. ‘As for now there is no cure for AIDS. These doctors who promise a cure are cheats! Their only aim is to make money through fraudulent means. In addition to this the patients with AIDS do not believe that there is no cure for AIDS’, says Prof. M. Ganapathy of the Madras Medical College.

In December 2002, a division bench of the Kerala High Court in India ordered notice by special messenger to T.A. Majeed, proprietor of ‘Fair Pharma’, Ernakulam. This was in response to a public interest writ petition seeking to restrain him from manufacturing, marketing and selling a drug developed by him until after expert bodies had tested it. T.A. Majeed who is not even a registered medical practitioner under any system of medicine has been manufacturing and selling a drug claiming to be an Ayurvedic prescription for treatment of AIDS patients since 1989. The drug is named ‘Immuno Q.R.’ Each course of medicine costs about Rs.8,800. The ‘ad’ in various dailies has fetched him about Rs.10 crore! Pending an investigation, Majeed has been ordered to keep away from
advertising his find. Since the scientific world has not developed any known cure for AIDS and no Government has organized any suitable drug, patients have been warned to keep away from such Quack doctors who fleece the patients.

3.6 AIDS: CHALLENGE TO FAITH AND BELIEF

AIDS is a converging crisis, which threatens human well-being. This also offers new opportunities for humanity. Global AIDS contributes in a large measure to the crisis of faith and belief. Believers share the reactions of fear and denial that are common to everyone, when they first encounter AIDS. Believers see God as all merciful. But they are unable to understand God’s love in the face of death due to AIDS. This is so when the so-called innocent victims of AIDS, such as babies, those who contracted AIDS through contaminated blood transfusion face death. The dreaded disease really challenges their faith and belief.

Christians too share limitation of understanding with everyone else of the seriousness of AIDS. The Gospels too present evidence that Jesus had to search painfully for meaning and understanding in the events of His own life. He warned us

93 SAKUNTALA NARASIMHAN, Spurious AIDS Drug resurfaces, in India Today, Living Media Bombay, Feb 18, 2002, p.20
that disciples are not greater than their Master.\textsuperscript{94} Hence in the face of AIDS everyone has to learn to live with apparently unanswered questions even in matters of faith and belief.

St. Augustine faced with the problem of evil muses thus: God is so good that He can turn evil to good. He therefore does not permit any evil except for a greater good. What that greater good is especially in our case where millions of innocents seem to be suffering without any fault of their own, our limited human mind cannot comprehend. One point to be kept in mind is the co-responsibility of everyone for everyone. All of us have been affected not only by the sin of Adam and Eve, but also of our other ancestors of past generations. In the sight of God therefore, we are one family and children sometimes suffer the consequences of what their parents did. On the other hand, St. Augustine referring to the sin of our first parents says, 'oh! happy fault of Adam, which brought down for us so great a Redeemer.' Through this Redeemer God is answering the questions of the human mind concerning suffering, pain, sickness and death. Our Heavenly Father is answering one mystery – the mystery of suffering – through another mystery, of redeeming love, namely the mystery of the cross.

\textsuperscript{94} In, Jn 13: 6, New Revised Standard Version, Theological Publication in India, Bangalore, 1990.
3.7 AIDS: ETHICS AND LAW

We know that AIDS is a personal crisis and human tragedy. As such, AIDS has far reaching effects on society as well as on individuals. The AIDS epidemic has raised a number of legal and moral issues. Different moral dilemmas present themselves in different cultures and nations.

The epidemic of AIDS has raised a number of legal issues for people at risk of contracting HIV, and those already infected with the virus, their friends and their families. AIDS related legal issues deal with employment, civil rights, privacy, family law and such other topics, and education as mentioned above.

An indication of how complex these issues are can be seen by the proliferation of HIV-related laws in many countries. In the U.S alone some 500 new statutes have been passed with specialist centers on AIDS law, journals, cases and a new breed of expert lawyers. A number of questions arise when one has to deal with ethics and law in view of the epidemic of AIDS. Those are:

- Does the law keep a person’s HIV status confidential?

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Is it legal for a hospital or doctor to withhold treatment to a person who has HIV?

How long can a person who has HIV infection remain insured?

Can a person with HIV infection qualify for social security benefits?

Can a person be held legally responsible if he infects another person with HIV?

What should a person do if he knows that someone who has HIV is knowingly spreading the virus to others?

Can a person be fired from his/her job if he/she has HIV?

Can countries legally forbid entry to HIV patients who come as tourists, students or any other reasons?

Should people with HIV tell their prospective sex-partners that they have the virus?

These are some of the dilemmas people face in the AIDS infected society. AIDS has affected society at many levels. The courts are hearing cases involving AIDS discrimination, privacy fights and personal responsibility. The expanding AIDS epidemic continues to raise many complex issues. Still personal responsibility remains the greatest hope for curbing AIDS.  

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* SETH C KALICHMAN, Answering Your questions about AIDS, A.I.T.B.S. Publishers, Delhi, 1997, p.99
3.8 AIDS AND ABORTIONS

One of the ends of marriage is procreation. Sex is meant by God to be enjoyed. It is one of the most amazing and intensely enjoyable experiences God has given mankind. God intended husband and wife to use sex reasonably. Out of that beautiful loving relationship were to come children who would grow up feeling loved and secure in the family.

In a civilized and moral society conception of a child is considered as God’s gift. Abortion is considered a crime by the civilized society. The Catholic Church is against abortion as a means of family planning. But a time has come when moral values take a back seat in the face of the dreaded disease.

When a HIV positive mother conceives it is almost sure that the baby in her womb too gets infected. The HIV can cross the placenta in the womb and can also get infected during labor when the baby swallows amniotic fluid and blood. It is estimated that about 40% of the babies born to HIV positive mothers would get infected and die a most painful death within a few years. The diagram below shows the lifespan of children with AIDS.  

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97 European Collaborative study update presented at the IX International AIDS Conference in Berlin, June 1993
In such a situation what could the mother do? Should she allow the baby to be born and allow it suffer an agonizing death in her arms or terminate the baby’s life through abortion? It is a moral and ethical question and the answer is not an easy one. Many unbelievers do not hesitate to abort the fetus. Believers however must respect a higher low and demand the same respect even from unbelievers.

3.9 AIDS AND DEMAND FOR DIVORCE

For us Christians, marriage is a holy sacrament and divorce is unthinkable. Jesus Christ himself preached against divorce when he said that: ‘It was also said, ‘whoever divorces his wife, let him give her a certificate of divorce’. But I say to you that anyone who divorces his wife, except on the ground of
unchastity causes her to commit adultery.' In the Western world divorce has become common. It takes place even on flimsy grounds! But in Indian society the family is held as sacred. Hence divorce is not common. But due to the dreaded disease, AIDS this is changing. There are nearly 4 million HIV positive people in India. One or two members in the family are infected with AIDS. This situation has greatly affected the Indian family. When one of the partners is diagnosed HIV positive then sexual activity is sure to infect the innocent partner. In such cases sometimes divorce may seem to be the only alternative.

3.10 AIDS AND SUICIDAL TENDENCY

As AIDS has been spreading at an alarming rate, it is now scaring patients with AIDS into suicide, say experts. Throughout history suicide has been a uniquely human response to the misery of illness, suffering and shame. Increased rates of suicide among persons with serious illness have been well documented; these risks are especially high when the illness includes a psychiatric disorder. Persons with AIDS are frequently depressed, in some cases, have suicidal tendencies. In India as meetings were held across Mumbai during ‘AIDS Week’ from December 1 to 7 in 1998, 10 HIV infected persons committed suicide out of depression. In fact

98 The Holy Bible, Mt 5:31-32, Theological Publications in India, Bangalore, 1999
during these 7 days, campaigns were held to spread awareness about the deadly disease AIDS. The irony highlights the fact that the HIV has already breached astronomical proportions by warming its way into the human psyche. This is actually frightening patients into taking their lives.99

The tendency to commit suicide is a common terminal event in people with AIDS, usually early in the illness. But also tragically so in people who had a positive test result, if counseling afterwards was poor. That is why HIV testing, if found positive should also accompany proper counseling.

A Small but growing number of peoples are also committing suicide because they fear they have AIDS.100 A lot of people have been committing suicide in the U.S.A, Europe, Africa and in India too. An Indian Health Organization (IHO) report has revealed that five HIV infected patients under their treatment committed suicide during the week of December 1998. This tendency has been on the increase year after year.

When someone has lost his job, has been thrown out of his home, has been rejected by family and disserted by friends, it is not surprising that he/she feels rejected. News of AIDS spreads only too fast. We need to show that we can really go

99 J.DEV, AIDS is now Scaring people into Suicide, in The Indian Express, Bangalore, Feb. 16,1998, p.6
100 Among AIDS patients, up to thirty six times more likely to commit suicide than general population, Journal of the American Medical Association, 239:9,1998
out of our way to make infected people feel accepted, loved and welcomed. If someone were depressed, it would be wise to ask him or her if one has even thought of committing suicide.

Persons with AIDS are frequently depressed and, in some cases, think of suicide. Suicide is often attempted as a cry for help. Particularly tragic is the person who takes twenty paracetamol tablets, expecting to go off to sleep. After most of a day is passed, the person walks into casualty looking sheepish. This was a cry for help, not a serious attempt to commit suicide, but the liver is permanently damaged. Within a few days the person dies a woeful death.

The persons with AIDS have an elevated rate of suicide. In a study conducted in the USA, suicide was found to occur among PWAs of all ages, and the rate for male PWAs was 7.4% higher than for men in the general population. However, the declining trends in suicide rates between 1987-1989 was particularly encouraging, perhaps reflecting greater optimism among PWAs about both their quality of life and their chances for long-term survival or a lessening of social stigma. But this was not to continue. According to the latest reports from Andra Pradesh a state in India, suicidal tendency is on the rise. Lakshmi a 34 years old housewife till recently saw her future slipping away from her when she received a positive report for

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HIV! Lakshmi, who had come to the city of Vishakapatnam with her husband, could not digest this fact and committed suicide by setting herself ablaze. Her case is the sixth in a spate of suicides by HIV affected victims in the district over the last two moths. That is what the official figures say. There were four more suicides in the same period but officials would not confirm whether the HIV was the villain. The number of HIV positive cases in the district is on the rise. Officials say that with many cases going unreported, the actual number could be 10 times more than the official figures. Fear of social boycott, concern that other members of the family will be infected and the fact that there is no cure must be driving the victims to suicide, observes Veera Raghava Rao, a volunteer with a Jana Vigyana Bharathi, an NGO campaigning against AIDS.

3.11 AIDS AND EUTHANASIA (MERCY KILLING)

Euthanasia literally means 'mercy death'. In a few countries it has been legalized conditionally. But in the U.S.A., U.K, India and most other countries it is illegal. Many people who are terminally ill therefore contemplate hastening their own death once they see that the quality of their life has irreversibly declined. Of course euthanasia raises numerous moral and social issues. Interest in euthanasia has increased in recent years with respect to AIDS and other illnesses that cause
suffering and death in young people. It is rare for someone to ask for euthanasia without 'burden, on other people' being a major factor. If we give way and agree, we are then killing people, because they feel they are too heavy a burden to family or for friends. Most of the people make the request for euthanasia because they are depressed. Natural sadness is not the cause of depression; rather depression is caused when sadness is out of all proportion to the situation.

When somebody is depressed he /she always loses a sense of self worth. Everything seems useless and hopeless! Yet we have no right to take away our own life, nor could we ask someone else to put us to sleep. No one can create life, and life is to be respected. Human life is to be treated with highest regard. Hence let us stop playing God in secret, behind closed doors and start giving back to people control over their own lives, with dignity, self-respect and respect for human life.

3.12 AIDS AND WITHHOLDING TREATMENT

Another moral aberration with regard to the patients of AIDS would be withholding treatment from them! Examples include the decision of an AIDS patient or his relatives not to

102 SETH C KALICHMANN, Answering your Questions about AIDS, A.I.T B.S. Publishers and Distributors, Delhi, 1997, p.176
104 Ibid, p.184
continue with life saving procedures. An AIDS patient may decide that he cannot bear the thought of another long struggle with many tests and special treatments for his next pneumonia and decides to stay at home to die. This is not sufficient reason for society to abandon that person to himself and leave him to his fate.

CONCLUSION

The purpose of this chapter has been to highlight the social and ethical repercussions of AIDS on society. Every pandemic has some repercussion on society. Yet the repercussions wrought by the epidemic AIDS are much more alarming and menacing. These repercussions point out to the need of social awareness on AIDS and HIV.

In India the efforts of the government to combat this dreadful disease have been woefully inadequate. In this chapter I have dealt with only a few social and ethical repercussions to provide some glimpses into the global present day situation. The need of the hour is the concerted efforts by the governments, NGO's and the Churches as a whole to create awareness among the masses of India on this deadly disease and make all out efforts to prevent it, diffuse it and also to suggest means and methods of solving psychological, social and ethical problems arising from the crisis.

105 As experience of doctors grows, many tests that put the patients to unbearable pain and trauma can be avoided. These days diagnosis can drastically reduce to fewer procedures.