

SCIENCE AND TECHNOLOGY

Fresh hope in new Aids treatment

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Science Editor

One of the major symptoms indicating that a person infected with the Aids virus is approaching the final stages of the disease is the appearance of candidiasis, a fungal infection causing thrush in the mouth, throat, the alimentary canal and reproductive organs.

Although oral thrush by the fungi *Candida albicans* is common in people without the Aids virus - resulting even from too much use of antibiotics - it can stop the Aids patients from eating and causes diarrhoea when it spreads to the large and small intestines. This way it endangers the lives of those whose body defence systems are already depressed.

Therefore, doctors are beginning to use new drugs and better clinical methods to manage Aids patients instead of doing nothing because there is no cure for it.

However, before discussing the treatment for fungal infections in Aids victims, there is need to deal with some of the general aspects of Aids tragedy in Africa.

The disease is potentially the biggest health problem facing African countries where basic health education and biomedical facilities are very limited.

Still, the socio-economic impact of the disease boggles the minds of those trying to control the epidemic. The number of Aids orphans - children whose parents die from Aids - may reach a million within the decade.

Globally, World Health Organisation experts estimate that there may be up to 50 million people with the Aids virus within the same period.

However, the original fear of the disease which made some doctors avoid treating Aids patients is diminishing. It is nowadays realised that the Human Immune Deficiency Virus (HIV) which causes Aids is not very contagious and sexual intercourse is still the major mode of transmission. But it is a rapidly mutating virus which might produce more lethal and resistant forms.

Although Aids has no cure, doctors constantly try to treat patients in order to prolong their lives and make them more productive. Even general publications dealing with Aids nowadays

contain sections on treatment of the disease.

Recently, a London-based international newsletter on Aids prevention and control, *Aids Action*, carried the information needed to combat fungal infections in patients infected with HIV.

The article was by Professor Ahmed Latif of the University of Zimbabwe's Medical School, who has also conducted clinical trials on Kemron, the anti-Aids drug developed by Kenyan researchers.

In Kenya, Prof Arthur Obel, the man who teamed up with the Director of Kenya Medical Research Institute, Dr Davy Koech, to provide the world with the first authoritative information that it may be possible to improve the health of some Aids patients using low-dose oral interferon, has also been using one of the latest anti-fungal compounds to combat candidiasis in Aids patients.

"Because the Aids virus damages our immune system, most Aids patients suffer from opportunistic infections which can be managed to help improve their lives," Prof Obel told the *Sunday Nation*.

The Professor, who once took two years off the University of Nairobi Medical School to plunge into intensive research at Kemri, said initial results from the use of one of the latest drugs in the treatment of systemic fungal infection indicated that it could eliminate thrush or infection by *Candida* in Aids patients.

"The thrush can extend into the throat, stomach and small intestines, besides the genitals, but the loss of appetite and extreme thinness in some patients can be linked to their failure to eat and swallow because of sores in the mouth and throat," he said.

Prof Obel was not willing to discuss details of his work until it is reviewed and launched by fellow scientists in Mombasa in the second week of June.

However, the *Sunday Nation* learnt that the new drug is a compound first developed in 1980 at Janssen Research Foundation in Belgium and is less toxic than some of the traditional antibiotics.

Indeed, the biggest problem with original anti-fungal drugs is

their side effects which may include the depression of bone marrow.

This can be lethal when used on Aids patients who already have a depressed immune system. Indeed, a common compound like potassium iodide can be effective against fungal infections but it is only for external use. The same is true for an antibiotic like Nystatin.

The emergence of Aids has resulted in a rush to develop less toxic drugs that may be used to treat those who may acquire fungal systemic infections and need to use drugs repeatedly because of their depressed immune system.

Health officials have feared that new drugs that are safer and

more effective against infections acquired by Aids patients may not reach Africa. But this may not be so. It also means that Aids patients in Africa, who die faster than their counterparts in the developed world, may have a chance to improve their lives.

The drug is also being tested in other parts of the world and the experts will compare notes and face other questions during the launching in Mombasa.

Those who tolerate chemistry mouthfuls can be told that the new drug belongs to the triazoles which form five-sided rings with two carbon and three nitrogen atoms. Triazoles in turn belong to imidazoles which are heterocyclic nitrogen compounds.

The Professor said: "It is im-

portant that we conduct our own trials on new drugs instead of just relying on data and information from elsewhere, especially the developed nations. If a drug is proving useful, there is no need of hiding the information and I will be in a position to give you all the details you need after the launching."

Prof Obel's reluctance to fully disclose the details of the drug may be linked to the rather "noisy" reception given to Kemron. However, it remains a fact that without the work of his team, the world would not be having the increasing clinical trials to determine the potentially positive effects of the drug which is now being examined by the Ministry of Health.



Prof Obel: A breakthrough?

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Battle against the big scourge hots up

Washington: From truck stops in Tanzania to movie houses in Uganda, Aids prevention is making dramatic strides but is still lagging the race to the deadly disease, according to a US Government report.

In an annual report to Congress on Aids, the Agency for International Development said Aids continues to be the most affected by Acquired Immune Deficiency Syndrome. It estimates that close to six million adults infected by the Aids-producing Hiv virus and 700,000 adults Aids victims, according to the report. Unless effective prevention programmes are started now, the worst thing could occur in many countries of Asia, the Near East, Latin America and the Caribbean, the report said.

The report on prevention and control of Aids in the developing world highlights several programmes, including one to distribute condoms at truck stops in Tanzania.

At one stop, a guest house owner with the nickname "Bwana Condom" and his associates were reported to distribute about 20,000 a month.

Other successes noted by the report include a social marketing programme that has sold over 2 million condoms in Cameroon, a television campaign in the Dominican Republic and a movie, financed by the agency, shown

commercially in Uganda.

"We have developed and honed the tools needed to fight the disease. We know how to prevent and control its spread," said Ronald W. Roskens, administrator of the agency, in a letter accompanying the report.

But, he said, Aids "is outpacing our efforts to contain it."

The report noted projections by the World Health Organisation that a cumulative total of up to 25 million people could be infected with Aids by the end of the decade, including 10 million infants and children.

The incurable disease is spread most often through sexual contact, needles or syringes shared by drug abusers, infected blood or blood products, and from infected pregnant women to their offspring.

The chief victims of Aids have been homosexual men and intravenous drug abusers. Health officials estimate that heterosexual contact is responsible for 4 per cent of cases.

It said some of the most alarming increases in Aids and Hiv infection have been outside Africa: - In Bangkok, Thailand, Hiv infection among drug users is up from less than 1 per cent in 1988 to 50 per cent in 1990. - In Bombay, India, infection in a group of 1,000 prostitutes rose from 1.6 per cent to 23 per cent in less than two years.