

Medical History

When did the HIV Infection Start ? Story of the First Few Patients

HIV infection, first appearing in a big way in the 1980s, took the world by storm. As news of the various aspects of the disease spread in the media, there was a sense of panic among the pundits and the public all over the world. But did HIV actually start in the 1980s, or was it present in a small way much earlier?

On 3rd July, 1981, the New York Times reported: "**Rare Cancer Seen in 41 Homosexuals**". In that article, the "rare cancer" is Kaposi Sarcoma & the cause of the illness is described as "unknown". This was the first proper coverage of this new disease in the media. After the initial phase of fear and confusion, intense scientific research started and by 1984, the virus was discovered. Was it something very old with a new face (like the coronavirus)? Or was it something absolutely new? Who were the persons first affected with HIV? These questions plagued researchers in the subsequent years.

In the ancient Indian text of CharakaSamhita (300 BCE), a disease called *Azokshyam* is described. Description of the disease has some similarities with AIDS. But it is almost impossible to say what the exact cause of this disease was. In the absence of more scientific data, scientists can only make a guess.

But what about the 1950s, 1960s or the 1970s? Was HIV infection present then? To answer this question, scientists have found a way. Tissue samples from patients of that time period are sometimes preserved and scientists have tried to do tests for HIV in those samples. The results have often been interesting.

For example, in between August 1972 and July 1973, blood was collected from clinically healthy children in Uganda as part of a study on Cancer. This blood was stored as part of the study and later, in 1985, as the HIV test became available, this blood was tested for HIV antibodies. It was found that 50 of the 75 samples were positive for the antibody (66%). However, in this study, the study subjects were not followed up. Hence, we do not know the fate of those infected.

Next, we will look at the records of some patients before 1980.

Grethe Rask :

Ms Grethe was a Danish Surgeon who started working in a village of modern Congo in 1972. In 1977, she went back to Denmark with some "unknown illness" and died of PCP illness on 12th December of the same year. After she came back to Denmark, she was tested at Copenhagen and found to have almost 0 T cell count. Grethe had also worked for a brief period in Africa in the 1960s. In 1983, one of her colleagues wrote a letter to the Lancet where her illness is described in details. At that time, HIV virus was still not discovered. But later analysis has convinced people that Grethe developed AIDS, probably after exposure to blood and body fluids of her patients in Africa. Later in 1987, her preserved blood samples were tested again in the USA and HIV infection was confirmed. Grethe is considered as one of the first non-African patients of HIV.

Robert Rayford :

Robert Rayford, who was a teenager in Missouri, USA was depicted as the first fatality from HIV in North America. In 1968, he was admitted to the hospital with disseminated Chlamydia infection. He later died in 1969 from severe pneumonia. At that time, the disease was not known but the physician caring for Redford had preserved his tissue samples. The case, due to its unusual features, had generated immense curiosity among the doctors at that time but no solution was forthcoming. These frozen tissues proved invaluable as later, as tests for HIV were discovered, those frozen serum and tissue samples were subjected to advanced tests including PCR and HIV was diagnosed in 1987. This led to the conjecture that HIV infection was probably occurring sporadically in the world for a long time before its emergence as an epidemic in the 1980s. On 11th March, 1987, the Chicago Tribune ran a headline: "Case Shakes Theories Of Aids Origin". The case of Rayford is described in details in this article. Question is, how did Rayford get the disease? He had never travelled out of the area. The exact route of transmission is unknown but probably, it is thought, he got the virus from sexual abuse at a young age.

Roed family :

In Norway, Arne VidarRoed was a sailor and truck driver, who became ill in 1968. He had recurrent lung infections, joint pain and edema. He later developed

motor dysfunction and dementia and died in 1976, after almost 10 years of living with the virus symptoms. His wife and young daughter also died of similar illness the same year. At that time, the cause of the illness was essentially unknown. Later, from their preserved tissue samples, HIV-1 infection was detected. Later research including genetic analysis found that Mr. Roed probably contracted the infection in the 1960s in Cameroon. The Roed family is probably the first documented family in Europe which was ravaged by the infection.

The HIV organism is said to have originated from Africa. But when was the first case of AIDS in Africa? Nobody can be sure. But historical analysis revealed that probably, the disease originated in and around Kinshasa in Congo. A plasma sample of an African person, which was collected in 1959 in Kinshasa, was later tested and found to be HIV positive. This testing was done as a part of an effort by scientists to trace the origin of the AIDS epidemic. But when did the disease come from Africa to Europe or USA? No one can be sure of an answer and probably, multiple people got infected from different sources around the same time period.

As this brief discussion makes clear, the HIV infection did not start suddenly. The virus was lingering in humans for a long time before exploding into an epidemic. This is not only true for HIV, but also for other infections. Tracing the root of an infection is often necessary to find its source.

How did HIV enter the Homo sapiens species? This topic is still open to speculation. But the general scientific theory is that the virus jumped from apes to humans when humans were exposed to primate blood and body fluids. Why did humans get exposed to primate blood? Because they were hunting bushmeat. And why? Here is where the topic diverges from hardcore scientific discipline to the realm of economics. Many authors argue that the brutal colonial economic policies of Europeans in Africa drove the local people to hunting bushmeat for subsistence and this increase in primate hunting in deep forests may have caused

the emergence of HIV. In Congo, the local people were driven by the colonists into deep forests in search of rubber and these activities increased chances of man-ape interaction. Then, the railroad network built by the colonial masters for transportation of rubber may have been instrumental in spreading the HIV epidemic throughout Congo.

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HIV in figures : —

- Almost **38 million** PLHIV globally (of them 8 million unaware of their status)
- Around **2 million** new infections per year
- Between 770000-1000000 deaths per year from HIV
- **24.5 million** accessing ART

INDIA :

- ◆ 2.1 million PLHIV
- ◆ Annual death: 69000
- ◆ Annual new infection: 88000