

Threat of a New HIV Strain: Insights from a Case of Gorilla to Human Transmission

Yang Kerley*

Department of Surgery, Quanzhou Normal University, Quanzhou, China

DESCRIPTION

The Human Immuno Deficiency Virus (HIV)/ Acquired Immuno Deficiency Syndrome (AIDS) epidemic has long been a global health concern, with the virus's origin tracing back to non-human primates in Central Africa. The most prevalent strain, HIV-1, is believed to have originated from Simian Immunodeficiency Virus (SIV) found in chimpanzees, while HIV-2 is linked to SIV in Sooty mangabeys. Recent reports of a woman carrying a new strain of HIV acquired from gorillas have introduced a new dimension to the ongoing battle against the virus. This article explores the implications of this development, focusing on the epidemiological, virological, and public health aspects. HIV, or Human Immunodeficiency Virus, attacks the immune system, leading to Acquired Immuno Deficiency Syndrome (AIDS) if untreated [1]. The virus is categorized into two main types: HIV-1 and HIV-2. HIV-1, the more common and virulent type, is divided into several groups, with group M being the most widespread. HIV-2, while less common, also poses significant health risks. SIV is the precursor to HIV, found in various non-human primates. Cross-species transmission of SIV to humans likely occurred through hunting and consumption of bushmeat, where the virus adapted to human hosts and evolved into HIV. The majority of HIV cases in humans are linked to SIV from chimpanzees (for HIV-1) and sooty mangabeys (for HIV-2) [2-3].

The identification of a new strain of HIV from gorillas represents a significant development. Gorillas, like other primates, harbor SIV, but it has not been previously linked to human infections. The emergence of a new HIV strain from gorillas indicates a potential zoonotic overflowing incident where a virus from an animal crosses into humans and adapts to new host environments. A recent case involved a woman who was found to carry a new strain of HIV that was traced back to gorillas. This case has captured attention due to its implications for understanding HIV transmission dynamics and public health strategies [4-6].

Genetic sequencing of the new HIV strain revealed distinct differences from existing HIV-1 and HIV-2 strains. This new strain displays unique mutations in its genome, which may influence its virulence, transmission, and drug resistance profiles. Understanding these genetic differences is crucial for developing effective diagnostic tools and treatments [7]. The transmission of this new strain from gorillas to humans suggests that the virus has adapted to the human host. This adaptation could lead to different transmission rates and clinical outcomes compared to existing HIV strains. Studying the mechanisms of this adaptation will provide perceptions of how viruses evolve and adapt across species. Preliminary studies indicate that the new strain may affect the immune system differently than other HIV strains. The woman's immune response to this strain could vary, potentially influencing the progression of the disease and the efficacy of standard antiretroviral therapies [8].

The identification of a new HIV strain poses several public health risks. The strain's potential for increased transmissibility or virulence could exacerbate the HIV/AIDS epidemic, particularly if it spreads rapidly within populations. Surveillance and monitoring systems need to be updated to detect and respond to such emerging threats. This case highlights the importance of monitoring zoonotic diseases in regions where humans and wildlife interact closely. Central Africa, where gorilla populations are found, has historically been a hotspot for HIV transmission due to its proximity to wildlife. Increased surveillance in these areas is necessary to prevent further zoonotic overflowing incident [9].

Preventive measures should be strengthened to minimize the risk of zoonotic transmissions. This includes educating local communities about the risks of bushmeat consumption and promoting safe handling practices when interacting with wildlife. The new strain's genetic differences may pose challenges for current HIV diagnostic tests. Standard tests may not detect this strain effectively, leading to potential delays in diagnosis and treatment. Developing new diagnostic assays that can identify this and other emerging strains is essential. If the new strain

Correspondence to: Yang Kerley, Department of Surgery, Quanzhou Normal University, Quanzhou, China, E-mail: kerley37@yahoo.cn

Received: 01-Sep-2024, Manuscript No. HICR-24-33867; **Editor assigned:** 04-Sep-2024, PreQC No. HICR-24-33867 (PQ); **Reviewed:** 18-Sep-2024, QC No. HICR-24-33867; **Revised:** 25-Sep-2024, Manuscript No. HICR-24-33867 (R); **Published:** 02-Oct-2024, DOI: 10.35248/2572-0805.24.9.405

Citation: Kerley Y (2024). Threat of a New HIV Strain: Insights from a Case of Gorilla to Human Transmission. HIV Curr Res. 9:405.

Copyright: © 2024 Kerley Y. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

exhibits resistance to existing antiretroviral drugs, it could complicate treatment protocols. Research into the strain's susceptibility to various medications is necessary to ensure effective treatment options are available. The emergence of a new strain emphasises the need for an extensive HIV vaccine that can address multiple strains and potential future variants. Vaccine research should consider the genetic diversity of HIV and the potential for new strains to emerge [10].

Addressing the emergence of a new HIV strain requires international collaboration. Researchers, public health officials, and governments need to work together to monitor the situation, share information, and develop coordinated response strategies. Increased funding for research on emerging HIV strains is crucial. This includes studying the new strain's virology, epidemiology, and clinical implications. Investment in research will enhance our ability to respond effectively to future outbreaks. Raising awareness about the potential for new HIV strains and their risks is important for public health. Educational campaigns should focus on the importance of prevention, early detection, and the need for ongoing vigilance in the fight against HIV/AIDS.

CONCLUSION

The discovery of a new HIV strain originating from gorillas represents a significant development in the ongoing battle against HIV/AIDS. This case emphasises the importance of understanding the complex dynamics of zoonotic diseases and their impact on human health. Continued research, international interaction, as well as strong public health strategies are essential to address this emerging threat and mitigate its impact on global

health. By learning from this case, we can enhance our preparedness for future challenges and continue our efforts to combat HIV/AIDS effectively.

REFERENCES

1. Brown F, Bishop DH, Rhabdoviridae CJ. *Intervirology*. 1979; 12(1):1-7.
2. Cantas L, Suer K. The important bacterial zoonoses in "one health" concept. *One health*. 2014; 2(1):144-147.
3. Carter ED. *Pandemic: Tracking Contagions, from Cholera to Ebola and Beyond*. CDC.2017; 22(10):15-36.
4. Chua KB, Voon K, Crameri G, Tan HS, Rosli J. Identification and characterization of a new orthoreovirus from patients with acute respiratory infections. *PloS one*. 2008 25;3(11):e3803.
5. Cobb M. 60 years ago, Francis Crick changed the logic of biology. *PLoS biology*. 2017;15(9):e2003243.
6. Codeço CT. Endemic and epidemic dynamics of cholera: the role of the aquatic reservoir. *BMC Infectious diseases*. 2001;10(2):1-4.
7. Cohn SK. Epidemiology of the black death and successive waves of plague. *Medicalhistory*. 2008;52(S27):74-100.
8. C. Colijn, J. Gardy. Phylogenetic tree shapes resolve disease transmission patterns. *Publ. EMP*.2014;4 (1): 96-108.
9. Colson P, Richet H, Desnues C, Balique F. Pepper mild mottle virus, a plant virus associated with specific immune responses, fever, abdominal pains, and pruritus in humans. *PloS one*. 2010; 5(4):e10041.
10. Dalby AR, Iqbal M. A global phylogenetic analysis in order to determine the host species and geography dependent features present in the evolution of avian H9N2 influenza hemagglutinin. *PeerJ*. 2014;2(6):e655.