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Statement of concern

Reports about a highly virulent variant of HIV-1 circulating in the Netherlands is nothing but highly unethical fear-mongering

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Abstract

Chris Wymant and an entire armada of scientists published a small paper titled "A highly virulent variant of HIV-1 circulating in the Netherlands." The general media have picked up on this and are giving the impression that HIV is now a more dangerous infection. This is not the fault of the Wymant and colleagues, but it is highly problematic. This more than 30 years old knowledge, which is now published with big headlines outside the medical press as lurid news, is likely to provoke misunderstandings in the general population. A renewed ostracism and stigmatization of the usual risk groups is now a real prospect. The findings presented in the aforementioned paper should have been addressed exclusively to health professionals and should have better never ended up in the hands of commercial media.

Facts

HIV has long since become a manageable virus, and AIDS has become a rarity in high- and middle-income countries. Reliable prophylaxis is available with PrEP and PEP[5-8], and thanks to antiviral treatment, HIV-positive patients have a good chance of living almost the average life expectancy of other members of the society in which they live.[1-15] Like any other virus, HIV has many variants. One of them has been known for decades and was the focus of a recent paper by Wymant et al (2022).[1] In this paper, the focus is on a more virulent HIV variant that probably spread primarily outside Amsterdam in the 1980s and has been known since the early 1990s. With this HIV variant, the most important factor is to detect the infection early and to start therapy very quickly. "VB variant" - for virulent subtype B - is an epidemiologically irrelevant HIV variant whose particular aggressiveness has now been studied in somewhat greater detail. Routine scientific work, nothing more. The results are neither new nor spectacular. Apparently, this HIV variant had evolved long before it was first described in 1992. It contains more than five hundred mutations, and these genetic changes also initially gave the pathogen a noticeable advantage. Presumably, it spread from Amsterdam, but seems to have remained alongside less aggressive strains of the virus. This is because the highly effective antiviral drugs that have been used since 1999 against the development of AIDS as a result of HIV infection also work very well against the VB variant - provided they are administered early enough.

The VB virus may just be faster, it appears to replicate rapidly and, if combated too late, also apparently decimates the T cells that are important for a functioning immune system in a very short time. As part of the British "Beehive" project, the VB viruses of a total of 17 AIDS patients were genetically decoded, of which only one was from Belgium, one from Switzerland and the others from the Netherlands. Outside Amsterdam, additional clusters of VB-infected individuals were identified, bringing the total number to at least 109. According to the researchers, gaps in gene sequencing make it impossible to say exactly how widespread the disease actually is in Europe. Untreated, this variant reaches a viral load within the first two years that is three and a half times that of infected individuals of the same age. Nevertheless, it should be remembered that untreated HIV infections have become a rarity outside of Africa.

The very few patients infected with this HIV variant may develop symptoms earlier than with other variants - if left untreated, which is more theoretical than clinical reality in the years 2022. That untreated patients lose vital immune cells in their blood much more quickly is interesting, but also no news. It's true that other than in different HIV variants, the number of CD4 T cells in the blood decreases in 30- to 39-year-olds up to the critical value within three years after diagnosis - if an individual is infected with the VB variant. It may also be correct that this value can be reached in individual cases without treatment after only nine months. But what is the point? Unfortunately, Wymant and his armada of scientists could not find out which mutations in detail and which molecular mechanisms cause the higher virulence. **However, untreated HIV cases have become a rarity outside Africa, and this has not changed.** Therefore, the results are as interesting as they are **irrelevant** to real clinical life.

Discussion

HIV is an infection that causes significant psychological suffering due to stigma and is still a concern in the field of community medicine.[17-20] At the same time, AIDS has not been an unavoidable consequence of HIV infection anymore, for more than two decades.[1-15] Thanks to highly effective antiviral therapies, the absolute majority of HIV patients undergoing treatment only have the infection, they no longer develop the deadly AIDS syndrome. The viral load of most well-treated HIV-positive patients is zero or close to zero. In this case, they are practically no longer infectious.[1-15] **There is no evidence that these facts are not applicable to the HIV variant discussed by Wymant et al.**[1]

Prophylactic use of antiviral drugs (PrEP) has even made infection with HIV (all variants) almost impossible, and HIV has always been a vulnerable and not very easily transmissible virus compared with Hepatitis B/C and other viruses. HIV is no longer a killer virus outside Africa. Other infectious diseases such as the mentioned hepatitis B and C and treatment-resistant forms of tuberculosis often remain undetected and are then far more dangerous than a treated HIV infection. Nevertheless, HIV-infected individuals are still suffering from stigmatization, exclusion and discrimination. So puffery and lurid headlines about a supposed new "killer HIV" are likely to reignite stigmas that have just been overcome with a lot of effort.

Never should the paper by Wymant and colleagues have led to headlines in the mass media. The social and psychological damage caused by it is enormous and the negative consequences can hardly be estimated. It is urgently necessary that the group around Wymant revises its paper and classifies it epidemiologically as well as socio-medically correctly in order to reduce the damage caused by mass media hysteria and misinformation.

Conclusion

The HIV variant described in the Wymant paper is neither new nor unknown, it is of academic interest, if at all. Epidemiologically it is irrelevant and clinically no reason for concern. We warn against being frightened by media reports about it. **With regard to HIV, everything is as it has always been since the late 1990s. It is an infection that can be prevented and treated with medication.**

Conflicts of interest

none

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