MPOX, an ongoing epidemic
MPOX, una epidemia en curso

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Monkeypox is a rare viral disease endemic to Central and West African countries and is transmitted to humans through contact with infected animals, particularly rodents and primates, or through human-to-human transmission. The disease causes fever, rash, and pustules, and can lead to serious complications such as pneumonia and encephalitis[1]. While some antivirals like Tecovirimat (TPOXX) and ganciclovir have shown activity against monkeypox in vitro or in animal models, their efficacy is being evaluated in humans with MPOX, have an adverse toxicity profile (ganciclovir) or are not available yet in Spain (TPOXX). Thus, supportive care is the basis for current clinical management of symptoms[2].

Recent Outbreaks

In recent years, there have been several outbreaks of monkeypox in Central and West African countries. In 2018, an outbreak was reported in Nigeria, which spread to other countries in the region, including the Central African Republic, Cameroon, and the Republic of Congo. The outbreak affected over 1,000 people and resulted in several deaths. In 2021, a new outbreak was reported in Nigeria, with over 150 cases and several deaths reported so far.

According to the eCDC-WHO Regional Office for Europe[3], a total of 25,874 cases of MPOX have been identified up to 04 April 2023, from 45 countries and areas throughout the European Region. Over the past 4 weeks, 28 cases of MPOX were identified from 7 countries and areas, indicating that active onward transmission persists in Europe, so cases might potentially begin to rise at any time.

Of the 25,763 cases reported, 25,584 were laboratory confirmed. Furthermore, where sequencing was available, 489 were confirmed to belong to Clade II, formerly known as the West African clade. The earliest known case has a specimen date of 07 March 2022 and was identified through retrospective testing of a residual sample. The earliest date of symptom onset was reported as 17 April 2022.

The majority of cases were between 31 and 40 years-old (10,146/25,731 - 39%) and male (25,268/25,701 - 98%). Of the 11,256 male cases with known sexual orientation, 96% self-identified as men who have sex with men. Among cases with known HIV status, 38% (4,042/10,623) were HIV-positive.

Clinical Presentation in Europe

The majority of cases presented with a rash (15,303/16,027 - 96%) and systemic symptoms such as fever, fatigue, muscle pain, chills, or headache (10,855/16,027 - 68%). There were 783 cases hospitalised (6%), of which 271 cases required clinical care. Eight cases were admitted to ICU, and six cases of MPOX were reported to have died.

Occupational Exposure

To date, WHO and ECDC have been informed of five cases of occupational exposure. In four cases of occupational exposure, health workers were wearing recommended personal protective equipment but were exposed to body fluid while collecting samples. The fifth case was not wearing personal protective equipment.

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Impact on HIV Patients

HIV patients, particularly those with low CD4 counts, are at a higher risk of developing severe complications from monkeypox. HIV patients with low CD4 counts may also have other underlying health conditions that can further increase their risk of complications from monkeypox. It has been proposed that MPOX should be considered an AIDS-defining disease, although this question remains controversial[4].

Prevention and Control Measures

Preventing monkeypox outbreaks in HIV patients with low CD4 counts requires a multi-faceted approach, including vaccination, infection control measures, and supportive care. Currently, there is no specific vaccine for monkeypox, but the smallpox vaccine can provide some protection against the disease. HIV patients with low CD4 counts should be vaccinated against smallpox if they have not previously received the vaccine.

Infection control measures can also help prevent the spread of monkeypox in healthcare settings. Patients with suspected or confirmed cases of monkeypox should be isolated and treated using appropriate infection control measures, including the use of personal protective equipment by healthcare workers. Hand hygiene, disinfection of surfaces and equipment, and safe disposal of contaminated materials are also essential to prevent the spread of the virus.

Supportive care is also important for HIV patients with low CD4 counts who develop monkeypox. Treatment may include antiviral medications to help manage symptoms and prevent complications, as well as supportive care to manage fever, dehydration, and other symptoms. HIV patients with low CD4 counts may also require additional medical support, such as oxygen therapy, to manage respiratory complications.

It is uncertain if newly HIV-diagnosed subjects with low CD4 counts and MPOX should initiate antiretroviral therapy immediately or not, due to some evidence of accelerated clinical progression upon ART initiation.

Future Research Directions

Given the significant impact of monkeypox outbreaks on HIV patients with low CD4 counts, there is a need for further research into the disease and its management. This includes developing new vaccines and antiviral medications specifically for monkeypox, as well as improving infection control measures in healthcare settings. There is also a need for better understanding of the impact of monkeypox on HIV patients with low CD4 counts, including the risk of complications and the effectiveness of different treatment strategies.

Conclusion

Monkeypox is a potentially serious viral disease that can have a significant impact on HIV patients with low CD4 counts. Prevention and control measures, including vaccination, infection control measures, and supportive care, are essential to prevent outbreaks and manage cases of the disease. Further research is needed to better understand the disease and its impact on HIV patients, and to develop more effective prevention and treatment strategies.The evidence of persistent onward transmission in Europe shows that, unfortunately, the MPOX pandemic is not over.

References

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