

## Increased prevalence of HIV among Monkeypox patients – An alarming update

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To the Editor,

While COVID-19 pandemic has wreaked havoc throughout the world, the emergence of the monkeypox outbreak in early 2022 has posed a new global health threat, and it was subsequently declared a public health emergency of international concern by WHO on July 23rd, 2022 [1]. Monkeypox, an enveloped double stranded DNA virus belonging to the *Orthopoxvirus* genus of the *Poxviridae* family, can be transmitted through close contact with someone carrying the virus, particularly via respiratory secretions, skin to skin contact, contact with virus infected fomites and body fluids, that may occur during sexual contact. Patients with monkeypox may present with flu like symptoms, soon followed by swollen lymph nodes (near the groin and armpit areas) and rash on face, vagina, and anus [2,3].

A recent report by CDC has summarised some provisional findings regarding the prevalence of Human immunodeficiency virus (HIV) in some patients with Monkeypox [4]. It has been observed that 38% of 1969 Monkeypox patients in 8 US jurisdictions were HIV positive and 41% were diagnosed with one

or more sexually transmitted infections (STIs) in the previous year. Among these HIV positive persons, 82% of them had achieved their HIV viral suppression. Along with its high prevalence, there was an increase in weekly percentage of HIV positive monkeypox patients from 31% to 44% in the month of July, suggesting the increasing transmission of monkeypox among networks of HIV positive persons. Moreover, increased hospitalizations and worsening of clinical symptoms were identified; HIV positive patients were more likely to experience rectal pain, rectal bleeding, bloody stools, tenesmus, proctitis and even worse outcomes in patients with unsuppressed HIV viral load.

These findings may suggest that the presence of HIV, whether suppressed or not, may contribute to monkeypox outbreak in the region, and also result in worse clinical outcomes and higher hospitalisation rates among monkeypox patients. However, there seems to be limited evidence that connects HIV to monkeypox biologically. In fact, it has been suggested by the same report that the likely cause of this link may lie in their similar modes of transmission (i.e. through sexual contact) [4]. Furthermore, it was observed that the percentage of HIV positive monkeypox patients in this analysis exceeded the national HIV prevalence percentage suggesting that people already having access to HIV care and sexual health services are more likely to visit hospitals on experiencing Monkeypox signs and symptoms and therefore get diagnosed with Monkeypox, than are HIV negative individuals who do not already visit hospitals [4,5]. The percentage of HIV positive monkeypox patients who opted for HIV care (94%) was also found to be higher than the overall percentage of HIV positive patients who received care in 2020 (74%), with similar proportion in statistics for patients receiving HIV pre-exposure prophylaxis (PrEP) [6]. Monkeypox symptoms may have reminded few of these patients, who had previously ignored treatment options, to opt for HIV care [4]. Apart from this, the worsening of clinical symptoms, especially those of rectum, can be explained by the site of exposure to virus. People who contracted HIV through sexual contact may also have contracted monkeypox through the same site. It was noted that HIV immune status and CD4 counts of patients did not affect the severity of rectal signs and symptoms, ruling out HIV as the cause of worsening of these symptoms [4]. There is also little evidence suggesting increased hospitalizations among HIV positive monkeypox patients. Nonetheless, worse outcomes were found in patients with unsuppressed HIV viral load, the cause of which is questionable.

More research needs to be done to rule out any misconceptions regarding the two diseases, especially focusing on whether HIV is directly affecting clinical outcomes in monkeypox patients. Routine matching of the data about HIV and monkeypox in other regions is needed to generalize the idea to monkeypox cases all over the globe, as the mode of transmission of the two diseases may vary in different communities. HIV affected population must be prioritized for vaccination against monkeypox as this condition might worsen their monkeypox symptoms and increase transmission among their network. Moreover, monkey pox patients should be screened for HIV and people tested positive should be given the therapy needed. It is also important that all health care providers, and not just sexual health providers, provide proper clinical guidance for monkeypox. Early diagnosis and treatment of monkeypox, irrespective of HIV status, will not only be effective in reduction of the cases, but also clear any confusions that have arisen due to these recent findings and thereby help in effective devising of strategies to deal with the monkeypox outbreak.

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