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Monkeypox: NHS offers tecovirimat for severe or complicated cases

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The antiviral drug tecovirimat can be offered to symptomatic monkeypox patients who have been admitted to hospital in the UK with severe or complicated infection, chief medical officer Chris Whitty has said.

In an alert to NHS trusts and clinical commissioning groups, Whitty said supply of the treatment was being managed by specialist regional adult infectious disease centres.[1]

Although tecovirimat was authorised earlier this year for use in monkeypox patients by the Medicines and Healthcare Products Regulatory Agency and the European Medicines Agency, there are currently no published human trial data showing the efficacy of the drug in these patients.

Currently, smallpox vaccines can be used to reduce the risk of catching monkeypox but there are no proven treatments to help recovery in those infected.

Tecovirimat inhibits the viral envelope protein p37 to prevent the virus from leaving the infected cells and spreading throughout the body. Clinicians are being encouraged to recruit monkeypox patients with active skin or mucosal lesions who haven't been admitted to hospital to the UK's Platinum trial, which is testing the efficacy of tecovirimat against the infection.[2]

Evidence base

A study published in the *New England Journal of Medicine* in 2018 investigated the efficacy of tecovirimat against monkeypox and rabbitpox in animal models, alongside a placebo controlled pharmacokinetic and safety trial involving 449 healthy human volunteers. It reported no safety concerns in the human volunteers and that most reported adverse events were mild. "The aggregation of the results from these multiple studies involving animals and humans supports tecovirimat as a potential smallpox antiviral drug," it concluded.[3]

Another paper recently published in *Lancet Infectious Diseases* shared data on one patient with monkeypox who had received tecovirimat (600 mg twice daily for two weeks orally). It reported that the patient experienced no adverse effects and had a shorter duration of viral shedding and illness (10 days hospital admission) compared with six other patients who received either smallpox antiviral brincidofovir or no antiviral (between 13 and 39 days in hospital).[4]

1 Tecovirimat as a treatment for patients hospitalised due to Monkeypox viral infection. www.cas.mhra.gov.uk/ViewandAcknowledgment/ViewAlert.aspx?AlertID=103213
2 Mahase E. Monkeypox: Fractional vaccine doses will be piloted as new treatment trial launches. *BMJ* 2022;378:. doi: 10.1136/bmj.o2080 pmid: 35998923
3 Oral Tecovirimat for the treatment of smallpox. www.nejm.org/doi/full/10.1056/nejmoa1705688#article_Abstract
4 Clinical features and management of human monkeypox: a retrospective observational study in the UK. www.thelancet.com/journals/laninf/article/PIIS1473-3099(22)00228-6/fulltext#seccestitle10