What physicians should know about using TPOXX to treat monkeypox

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Tens of thousands of monkeypox cases have been reported in the U.S., but the total number of infections is almost certainly higher. And while there are no treatments specifically approved or authorized for monkeypox, the viruses that cause monkeypox and smallpox are similar, and antiviral drugs developed to fight smallpox may also be used to treat monkeypox, which is sometimes called MPV.

An AMA webinar, “What Physicians Need to Know: Tecovirimat (TPOXX) for Treatment of Monkeypox,” features insights from experts at the Centers for Disease Control and Prevention (CDC), the Food and Drug Administration (FDA) and Weill Cornell Medicine on the use of tecovirimat for the treatment of monkeypox.

Where approval stands

Tecovirimat is not approved by the FDA for treatment of monkeypox infections.

It was approved for treatment of smallpox disease under an FDA regulation known as the Animal Rule, which “allows for approval of drugs when human efficacy studies are not ethical and field trials to study the effectiveness of drugs or biological products are not feasible,” said Adam Sherwat, MD, deputy director of the Office of Infectious Diseases in the Center for Drug Evaluation and Research at the FDA.

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At that time, it didn’t qualify for approval for treatment of monkeypox under the Animal Rule because “there were parts of the world, including West and Central Africa, where MPV was endemic and clinical trials could be conducted,” Dr. Sherwat said.

Access to tecovirimat is, however, available through a nonresearch expanded access investigational new drug (EA-IND) protocol held by the CDC. The EA-IND “allows for the use of tecovirimat for primary or early empiric treatment of non-variola orthopoxvirus infections, including MPV, in adults and children of all ages,” the CDC notes.

The National Institute of Allergy and Infectious Diseases is also sponsoring a randomized controlled clinical trial—the study of tecovirimat for treatment of human monkeypox (STOMP).

After the webinar took place, the CDC updated its guidance for TPOXX use under the EA-IND protocol based on data suggesting that broad use of the drug could promote resistance and render drugs ineffective for some patients.

The updated guidance says TPOXX should be considered for use in people who have:

- Severe disease, conditions such as hemorrhagic disease, confluent lesions (individual sores have joined into one larger sore), sepsis, encephalitis, eye infections or other infections that require hospitalization.
- Involvement of anatomic areas which might result in serious disease including scarring.

Check out this primer on what monkeypox is and guidance from the CDC on how to recognize it.

**Clinical trial underway**

“The study is really two studies in one,” said Timothy Wilkin, MD, MPH, assistant dean for clinical research compliance for human research protections at Weill Cornell Medicine and the STOMP lead.

The first is a randomized, double-blinded, placebo-controlled portion that seeks to determine whether tecovirimat is effective for the treatment of human MPV.

“We also have a second portion of the study where we provide open-label tecovirimat for certain populations, including children, people who are pregnant, and people with severe disease—severe immunosuppression or severe skin disease—that puts them at risk for severe outcomes,” Dr. Wilkin said.

Participation is two months. The hypothesis is that tecovirimat will lead to faster clinical resolution of human MPV disease compared with placebo. There are study sites in most major metropolitan areas.
Learn the four things every doctor should know about monkeypox and discover what doctors wish patients knew about monkeypox.

**Treatment considerations**

Tecovirimat is given in a single dose for patients who weigh more than 13 kilograms and should be administered with a fatty meal. It has been licensed in both oral and intravenous formulations, and both are available from the Strategic National Stockpile, where it is available free of charge. However, the EA-IND includes instructions for dosing patients between 3–13 kilograms.

“The CDC has worked with the FDA to really make it easier for health care providers to provide this treatment to patients with monkeypox,” said Brett W. Petersen, MD, MPH, deputy chief of the Poxvirus and Rabies Branch of the CDC’s Division of High-Consequence Pathogens and Pathology.

“There’s no requirement for pre-registration for clinicians or facilities, and the forms that are required under the EA-IND can all now be returned to the CDC after treatment begins.”

The presenters also discussed side effects and drug-drug interactions—particularly for patients with HIV and diabetes—as well as considerations for equitable access and whether health professionals should be vaccinated against MPV.

Look here for help with monkeypox coding. For the latest updates, visit the AMA’s monkeypox resource center.


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