

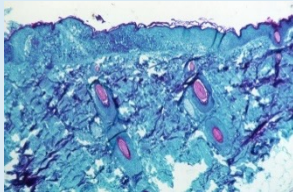
MONKEYPOX

- Monkeypox is an orthopoxvirus, related to smallpox and cowpox, that is normally endemic in parts of western and central Africa.
- Occasional sporadic cases have been previously described outside of Africa.
- In May 2022, multiple regions of Europe and North America reported clusters of monkeypox cases.



EPIDEMIOLOGY AND VIROLOGY

Very large, enveloped, double-stranded DNA virus (can be seen with light microscopy):



- First identified in research primates, but natural reservoir may actually be rodents
- Transmission via close contact with skin lesions, body fluids, respiratory droplets, and contaminated materials (such as linen)
- First human case identified in Democratic Republic of Congo (DRC) in 1970; endemic in DRC, Nigeria, Sierra Leone
- Approximately 200 cases in Nigeria reported since 2017
- Prior US outbreak in 2003 (47 confirmed and probable cases associated with exposure to imported animals)

MANAGEMENT

- **Contact local public health authorities immediately for suspected cases and to coordinate testing**
- Standard, contact, and airborne precautions recommended in all health care settings for suspected cases
- Although airborne transmission is not described, similarly presenting pathogens (eg, varicella, other poxviruses) could be airborne
- Drug treatment for severe cases:
 1. Tecovirimat
 2. Cidofovir
 3. Brincidofovir

CLINICAL FEATURES

- Symptoms similar to classic smallpox but milder
- Incubation usually 7 to 14 days before onset of fever
- **Fever**, myalgia, and **lymphadenopathy**, followed 1 to 2 days later by lesions in mouth and on skin
- Rash presents sequentially with macules, then papules, followed by vesicles or pustules that are deep-seated, firm, and well-circumscribed
- Genital lesions reported in recent outbreak



- Illness typically lasts 2 to 4 weeks
- Contagious from the onset of the rash and oral lesions, and lasts until these lesions have scabbed over
- Case fatality rate in West Africa estimated at 3% to 4%, with risk highest in children, young adults, immunocompromised persons

PREVENTION

- Smallpox vaccination is estimated to be at least 85% protective against monkeypox
- Vaccination can be effective as postexposure prophylaxis
- Two approved vaccines in the US, Europe:
 - **Jynneos** (Bavarian Nordic) – nonreplicating vaccinia virus vector, two-dose series, approved for smallpox and monkeypox
 - **ACAM2000** – live attenuated vaccinia strain; contraindicated in immunocompromised hosts, persons with eczema, and their close contacts
- **Vaccinia immune globulin (VIG)**