Monkeypox: What Clinicians Need to Know

Boghuma K. Titanji, MD, MSc., DTM&H, PhD
Division of Infectious Diseases
Emory University
Monkeypox – Basics of Transmission

Primary infection
Animal ➔ human
- Contact with infected animals
- Contact with contaminated animal products

Secondary infection
human ➔ human
- Contact with infected people
- Mother to fetus

Courtesy: World Health Organization training materials on Monkeypox
Monkeypox – Basics of Transmission

• Unprotected contact with:
  - Respiratory droplets
  - Skin lesions
  - Body fluids
  - Contaminated surfaces and objects.

• The virus can enter via:
  - Broken skin – animal bites
  - Mucous membranes
  - Respiratory tract

Airborne transmission via aerosols is possible but is not a predominant mechanism of infection
Incubation Period

• Long – 4 to 17 days (average 5-13 days).
• No symptoms.
• A person is not contagious during this period.
Progression of Symptoms – Prodromal Phase

• Febrile prodromal stage – lasts 1-4 days.
• Non specific symptoms – fatigue, muscle aches, chills.
• Lymph node enlargement is common.
• At the end of this period, lesions appear in the mouth.
• Patients are viremic during this period.
Progression of Symptoms – Rash Phase

Patients may still be viremic, virus is present in the skin lesions and rash is infectious.
Progression of Symptoms – Recovery Phase

• Skin rash clears in 2-4 weeks.
• Course of infection is self-limited and most individuals make a full recovery.
• Complications can occur and mortality can range from 1-10% depending on the clade.
• Antiviral therapies can be considered for severe cases – limited experience on (Brincidofovir and Tecovirimat for monkeypox treatment in humans).
Possible Complications

- Corneal infection and vision loss.
- Bacterial infection of skin lesions.
- Abscess and airway obstruction.
- Pneumonia
- Sepsis
- Encephalitis
- Miscarriage
- Death

Credit: Nigeria Center for Disease Control
Atypical Presentations – 2022 Outbreaks

• Genital, peri-genital and peri-anal lesions are common though not in all cases.
• Prodrome less prominent or absent.
• Fewer lesions even single lesions in some cases.
• Most cases mild.
• Close mimic of many STIs – easy to miss if not suspected.

Images: Courtesy of General Hospital University of Malaga
Some Close Mimics of Monkeypox Rash

- Herpes Simplex
- Varicella (chickenpox)
- Lymphogranuloma venereum (LGV)
- Primary syphilis chancre
- Condyloma lata (secondary syphilis)
- Molluscum Contagiosum

Images: Courtesy of General Hospital University of Malaga
Special populations at higher risk for severe infection and complications

- People living with HIV not on treatment and with low CD4 counts.
- Pregnant people.
- Extremes of age – young children and the elderly.
- Other immunocompromising conditions e.g. transplant patients, cancer patients receiving chemotherapy, treatment with immuno-suppressive therapy.
Conclusions

• Patients most likely to present in outpatient settings for rash.
• Be aware of atypical presentations.
• Maintain a high index of suspicion and low threshold for testing suspected lesions in individuals with epidemiologic risk factors for monkeypox.
• Be aware of close clinical mimics.
• Most infections so far, self-limited and patients make a full recovery.