

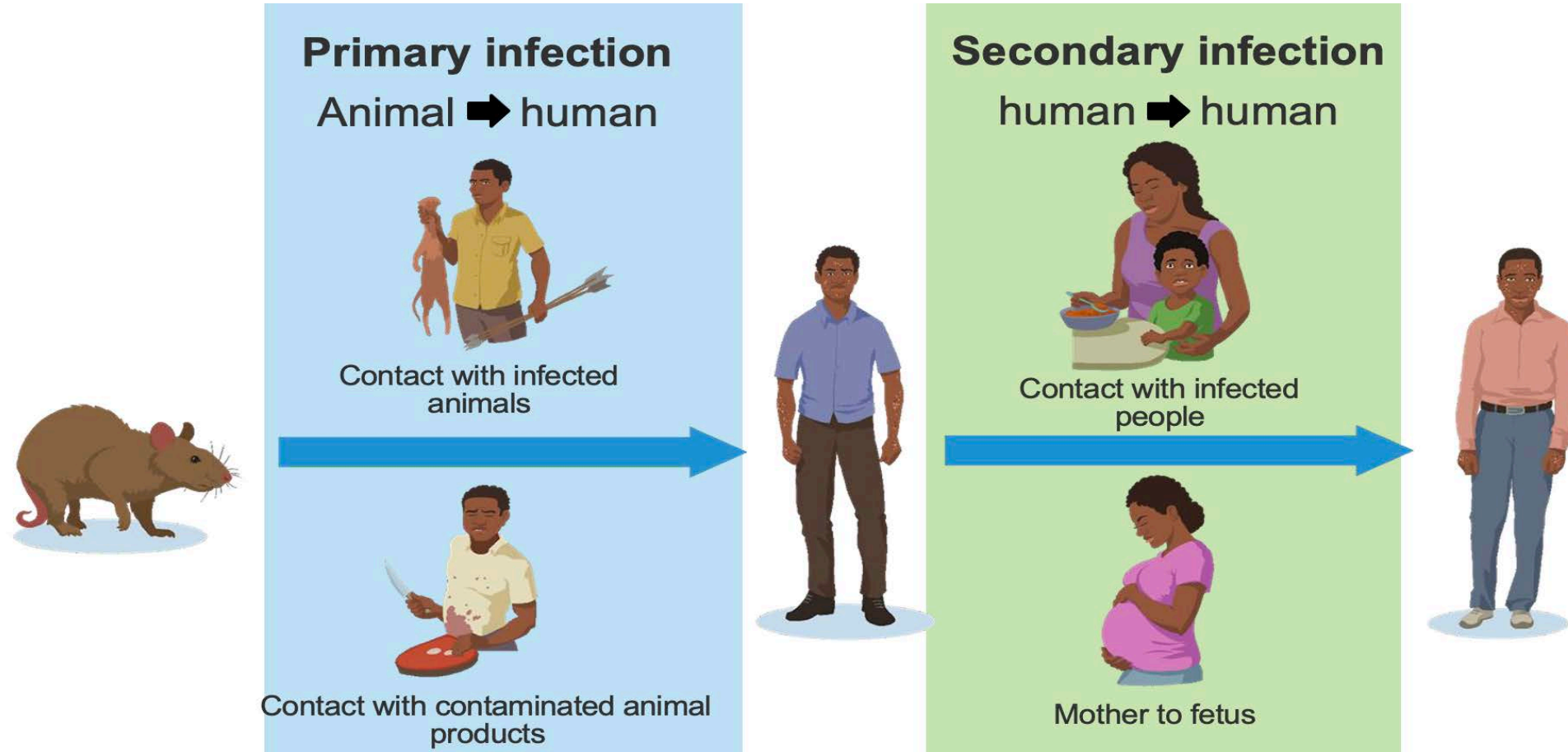
Monkeypox: What Clinicians Need to Know

Boghuma K. Titanji, MD, MSc., DTM&H, PhD

Division of Infectious Diseases

Emory University

Monkeypox – Basics of Transmission



Monkeypox – Basics of Transmission

- **Unprotected contact with:**

- Respiratory droplets
- Skin lesions
- Body fluids
- Contaminated surfaces and objects.



Droplets



Rash

- **The virus can enter via:**

- Broken skin – animal bites
- Mucous membranes
- Respiratory tract



Fomites – contaminated objects

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.

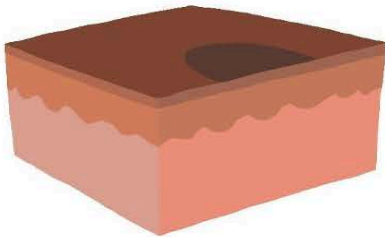


Progression of Symptoms – Prodromal Phase

- 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.

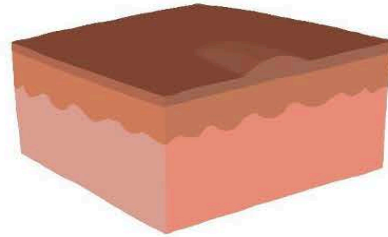
Progression of Symptoms – Rash Phase

Macule



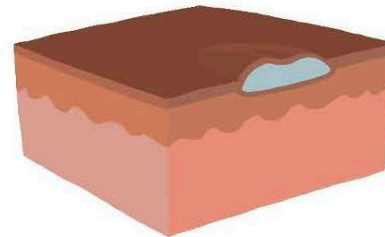
Credit: Emerg Infect Dis / N. Erez et al., 2018. Retrived from: <https://wwwnc.cdc.gov/eid/article/25/5/19-0076-f1>

Papule



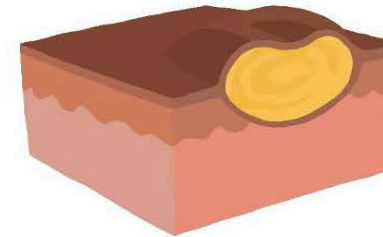
Credit: NEJM/ D.Kurz et al. .2004 Retrived from: <https://www.nejm.org/doi/full/10.1056/NEJMoa032299>

Vesicle



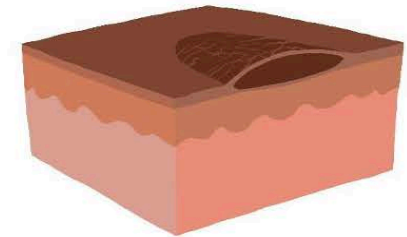
Credit: Andrea McCollum / CDC

Pustule



Credit: Toutou Likafi/ Kinshasa School of Public Health

Crust



Credit: P. Mbala /Institut Nationale de recherche biomédicale, DRC

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



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.