Case presentation, management and infection prevention and control monkeypox

SAA- WHO- AFRO Webinar

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Monkeypox – presentation and care

- Signs and symptoms include:
  - Fever
  - Swollen lymph nodes
  - Typical or atypical rash
  - Sores in the mouth and throat
  - Eye irritation or redness
  - Skin involvement of genitals or perineum

- Monkeypox treatment remains mostly supportive and symptomatic

- Specific antiviral treatment – available under study protocols in participating countries
Monkeypox - modes of transmission

- Knowledge of transmission is evolving
- Zoonotic transmission - from live or dead animals
- Person to person contact
  - sexual encounters are most commonly reported
  - face-to-face (such as talking, breathing, singing)
  - skin-to-skin (such as touching, vaginal or anal sex)
  - mouth-to-mouth (such as kissing)
  - mouth-to-skin (such as oral sex)
- Contaminated environments (surfaces, objects and materials touched by someone infectious)
- Common exposure settings include parties, bars, saunas, sex-on-premises venues, events and other gatherings
Complications of monkeypox

Complications
- Bacterial infection of eyes or skin
- Diarrhea and vomiting leading to dehydration
- Abscess with airway obstruction
- Bronchopneumonia
- Encephalitis (<1%), sepsis (<1%)
- Proctitis
- Urethritis
- Urinary retention

Danger signs
- Loss of vision
- Delirium, loss of consciousness, convulsions
- Respiratory distress
- Bleeding, inability to produce urine
- Signs of sepsis
Monkeypox: Long term consequences

- **Long-term sequelae**
  - pockmarks, scarring or loss of pigmentation
  - corneal ulcers and blindness

- **Complications of pregnancy**
  - bleeding, miscarriage or stillbirth

- **Optimized supportive care**
  - is essential
  - includes mental health support

Credit: Nigeria Centre for Disease Control
Credit P.K. Mbala, L’Institut National de Recherche Biomédicale, DRC
Monkeypox: Elements of patient care

- Fever and pain management
- Skin, eye and mouth care
- Respiratory care
- Hydration and nutritional support
- Mental health support
- Prevention & treatment of complications
- Infection prevention and control
- Testing and treatment for other infections
Fever and pain management:

▪ external **cooling**
  ▪ remove garments
  ▪ apply cool damp cloths

▪ **antipyretic** and pain medication
  ▪ **paracetamol**
    ▪ non-steroidal anti-inflammatory medication (avoid if ulcers, bleeding or dehydration)
  ▪ opioids where indicated

▪ Antiviral agent tecovirimat may reduce duration of symptoms, pain

Retrieved from: 123rf
Rash may lead to severe or permanent skin damage and fluid loss

Rash and skin care:

- avoid touching or scratching lesions
- gentle washing
- keep clean and dry
- protect and hydrate with moist dressings
- gentian violet or nystatin cream
- topical or oral antibiotics as needed
- treat inguinal or genital ulcers with a warm saline sitz bath or a light sofra-tulle dressing
Mouth care

Mouth sores can be painful

- wash mouth with warm clean salted water
- for severe ulcers, consider gentian violet or antibiotics
- vitamin C and other multivitamins

Sores can be a source of face-to-face transmission via respiratory droplets or short-range aerosols
Eyes may develop infection or ulcers

- vitamin A supplements
- protective eye pads
- topical or oral antibiotics in combination
- tetracycline or trifluridine eye drops / ointment
- do not use steroid ointment or drops
Rehydration therapy and nutritional support

Ensure patients eat and drink
- liquids: water, soups, teas, oral rehydration solution
- intravenous fluids if needed

Treat conditions affecting nutrition (mouth sores, vomiting, diarrhea)

Consideration for young patients
- oral vitamin A
- breast feeding, breast milk or infant formula according to the situation
- caregiver precautions, masks, hygiene
Mental health and social support

Provide psychological support
- psychologist
- social worker or
- specially trained nurse

Offer non-intrusive practical help to:
- calm patient and family
- keep them informed
  - what to know, what to expect
  - how to care for themselves
  - how to take precautions
<table>
<thead>
<tr>
<th>Condition</th>
<th>Treatment objective</th>
<th>Treatment and care</th>
<th>Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever</td>
<td>Prevent and treat</td>
<td>External cooling Antipyretic medications</td>
<td>Regular temperature monitoring</td>
</tr>
<tr>
<td>Skin infections</td>
<td>Prevent or treat secondary bacterial infections Promote lesion healing</td>
<td>Oral or intravenous antibiotics; incision and drainage; Advanced wound management</td>
<td>Fever, pain, tenderness, erythema, oedema, exudate, warmth</td>
</tr>
<tr>
<td>Exfoliation, skin compromise</td>
<td>Avoid scratching Minimize insensible fluid loss Promote lesion healing</td>
<td>Wash with soap and water or povidone-iodine solution Moist dressings and topical antibiotics (e.g silver sulfadiazine or gentian violet) Surgical debridement, skin grafts</td>
<td>Lesion count/rash burden Skin turgor in non-affected areas Body weight Fluid intake/output</td>
</tr>
<tr>
<td>Eye infection</td>
<td>Prevent corneal scarring and visual impairment</td>
<td>Vitamin A supplementation Ophthalmic antibiotics/antivirals</td>
<td>Repeat examination and vision testing Slit lamp examination</td>
</tr>
<tr>
<td>Mouth and throat sores</td>
<td>Minimize mucosal pain Encourage food intake Promote lesion healing</td>
<td>Oral/topical analgesic medications</td>
<td>Lesion burden Pain scale Food and fluid intake/output</td>
</tr>
<tr>
<td>Vomiting and diarrhea</td>
<td>Minimize fluid loss Maintain nutrition</td>
<td>Oral or intravenous rehydration Oral or intravenous antiemetic Antidiarrheal medication</td>
<td>Frequency and volume of emesis and diarrhoea, Body weight, skin turgor Food and fluid intake/output</td>
</tr>
<tr>
<td>Lymphadenopathy</td>
<td>Minimize pain Reduce swollen lymph nodes</td>
<td>Oral or intravenous analgesic or anti-inflammatory medications</td>
<td>Size of lymph nodes Pain/tenderness</td>
</tr>
<tr>
<td>Respiratory symptoms or distress</td>
<td>Maintain open airways Prevent and treat infection Prevent and manage respiratory distress</td>
<td>Suctioning of nasopharynx and Airways Incentive spirometry, chest physiotherapy Bronchodilator, nebulizer treatments Oral/intravenous antibiotics Oxygen, non invasive ventilation (e.g, BiPAP or CPAP) Intubation and ventilation</td>
<td>Respiratory rate and other vital signs Signs of distress such as indrawing, shortness of breath Pulse oximetry</td>
</tr>
<tr>
<td>Sepsis</td>
<td>Hemodynamic stabilization</td>
<td>Oral/intravenous antibiotics Intravenous fluid hydration, vasopressors Supplemental oxygen, corticosteroids, insulin</td>
<td>Pulse, blood pressure Fluid status</td>
</tr>
</tbody>
</table>

Adapted from: *Viruses. 2017 Dec; 9(12): 380.*
Infection prevention and control in healthcare

- Isolation room or space
- Handwashing
- Gown, mask, goggles and gloves
- Cleaning and disinfection
- Waste management
- Safe handling of linens
Infection prevention and control at home

- Follow the advice of health worker
- Provide a separate area for care
- Minimize contact
- Use protection: masks, gloves
  - to care for patient
  - to clean and wash at home
- Wash linen with care
- Disinfect surfaces and floors
- Wash hands frequently
Clinical management and IPC – interim guidance
June 2022

Scope of rapid interim clinical guidance

- Screening, triage, and clinical assessment
- Management of mild or uncomplicated patients
- Mental health care of patients
- Antivirals and other therapeutics
- Infection Prevention Control at health facilities
- Consideration for sexually active populations
- Caring for women during and after pregnancy
- Caring for infants and young children with Monkeypox
- Feeding of infants in mothers infected with Monkeypox
- Management of high-risk patients and those with complications or severe disease
- Caring for patients after acute infection
- Management of deceased patients
- Management of exposed health workers
- Collection of standardized data collection and the WHO Clinical data platform
- Uncertainties and areas for research

Clinical Management and Infection Prevention Control for Monkeypox Guidance
Clinical data entry platform for monkeypox

The objectives of the Platform are to:
• Describe the clinical characteristics of monkeypox
• Assess variations in clinical characteristics
• Identify the association of clinical characteristics with outcomes; and if available with vaccination and treatments
• Describe temporal trends in clinical characteristics

WHO invites Member States, health facilities and other entities to participate in the global effort to collect anonymized clinical data relating to suspected or confirmed cases of monkeypox and contribute data to the WHO Global Clinical Platform.

WHO has developed a clinical characterization case report forms (CRF) to standardize data collection of clinical features of monkeypox among outpatient and hospitalized cases.