

Monkeypox in a Non-endemic Setting: Challenges in the Diagnosis and Management of an Atypical Case

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Background

- Monkeypox is a zoonotic viral disease caused by the monkeypox virus, an Orthopoxvirus related to smallpox.
- Historically confined to endemic regions in Africa, recent outbreaks have demonstrated its capacity to spread globally.
- The disease is characterized by an incubation period, followed by a febrile prodrome and the development of a vesiculopustular rash.
- Recent outbreaks have highlighted changes in transmission dynamics, including increased person-to-person spread.
- Atypical clinical presentations, particularly in high-risk populations such as men who have sex with men (MSM), pose diagnostic challenges.

Objective

This case study presents an atypical monkeypox case in a non-endemic region and discusses diagnostic and management challenges. It emphasizes clinical awareness and focuses on how difficult it can be to detect monkeypox in areas where it is not common, especially when symptoms are very similar to other illnesses.

Case Presentation

- Describes a 28 year old Caucasian male admitted to the Emergency Department (ED) multiple times with the progression of monkeypox illness

Patient Presentation and Differential Diagnosis

Presentation:

- Initial Symptoms: chills, sore throat, and fever
- Resembles viral pharyngitis

Differential Diagnosis:

- Bacterial tonsillitis
- Peritonsillar abscess
- Syphilis
- Varicella
- Sexually transmitted infections.

Diagnostic Testing

- Throat swab for bacterial infections (negative)
 - CT scan of the neck (showing tonsillitis but no abscess)
- STI screening (negative for HIV, syphilis, gonorrhea)
- Non-variola Orthopoxvirus DNA PCR (confirmed monkeypox diagnosis)

Treatment

- Initially given empirical antibiotics due to concerns for bacterial infections.
- Once diagnosed, treated with tecovirimat (600 mg orally every 12 hours for 14 days).
- Supportive care included pain management and topical emollients.

Results



Discussion

- Diagnostic Challenges:
- The patient's initial misdiagnosis of viral pharyngitis and bacterial infections delayed proper treatment.
- Atypical presentation (tonsillar swelling, dysphagia, localized groin lesions) led clinicians to consider STIs and bacterial infections rather than monkeypox and made clinical differentiation difficult.
- Transmission & Epidemiology:
- The MSM population has been disproportionately affected in recent outbreaks.
- The shift toward sexual transmission and genital-localized lesions makes monkeypox resemble STIs.
- Global travel spread monkeypox to non-endemic regions.
- Role of PCR Testing & Advanced Diagnostics:
- Non-variola Orthopoxvirus DNA PCR tests helped confirm diagnosis.
- Rapid identification helps reduce transmission.
- Treatment with Tecovirimat:
- The patient's rapid improvement supports the effectiveness of tecovirimat for monkeypox.
- However, more trials are needed to fully establish its role in monkeypox management.
- Public Health Implications:
- Early recognition & education for healthcare providers is essential.
- Vaccination strategies and contact tracing programs are necessary to control outbreaks.

Conclusion

- Monkeypox can persist in non-endemic regions, which can lead to delayed diagnosis and mismanagement.
- Early suspicion, thorough history-taking (including sexual history), and PCR testing are key to timely diagnosis.
- Tecovirimat shows promise in improving outcomes, but further studies are needed.
- Stronger public health surveillance, rapid diagnostics, and vaccination efforts are critical in managing future outbreaks.

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