Is Spirochete or Monkeypox the Culprit of my Confusion: Incidental finding of Neurosyphilis in the Monkeypox Era

N. Hatchard DO[1], H. Lau MD[1], K. Qaderdan MD[1], L. Ciminera OMS-III[2]

[1] Internal Medicine Department Crozer Chester Medical Center , [2] Philadelphia College of Osteopathic Medicine

INTRODUCTION

- In May 2022, an outbreak of monkeypox in non endemic regions was reported and has since involved thousands of patients through the international travel or imported animals. It is an enveloped dsDNA virus that belongs to the Orthopoxvirus genus of the Poxviridae family, similar to smallpox with less severe clinical presentations. It is a viral zoonotic infection that results in a rash similar to smallpox and tends to be on the face, palms, soles, extremities, oral mucosa and genitals.
- Monkeypox can affect anyone regardless of sexual orientation but there is a higher prevalence among homosexual or bisexual males. Clinical presentations may also include fever, myalgia, lymphadenopathy and asthenia.
- Complications include secondary bacterial infections of skin lesions, corneal scarring resulting in blindness, sepsis or encephalitis. We present an unusual presentation of Monkeypox in a young male with concurrent neurosyphilis.

INITIAL CASE PRESENTATION

- A 32-year-old healthy male presented to emergency department with a 5-day history of a rash that began on his face and spread to his body after recently attending a pool party.
- On physical exam: non-itchy vesiculopapular rash with elements sized between 2-5mm in diameter spread over his face, neck, truncal and extremities. AAOx3 at that time, HR 80 bpm, RR 12/min.
- The fluid from the vesicle was sent for Monkeypox PCR and he was discharged home.

CASE DESCRIPTION

- Three days after initial presentation, the Pennsylvania Department of Health confirmed a positive Monkeypox. He had no other symptoms and was encouraged to self-isolate at home.
- He presented to the ED two days later with hypochondriacal delusions, confusions, and somnolence.
- CT head negative and lab work including CBC, CMP, PT/INR, CRP, ESR were within normal limits.
- Given the acute onset of neurological symptoms, a lumbar puncture was performed which was suggestive of viral meningitis.
- With the provision diagnosis of Monkeypox encephalitis, he was started on Tecovirimat. A history of homosexual behavior had been traced age 20 years, STI panel were sent and positive for VDRL and RPR.
- CSF studies (below) confirmed diagnosis of neurosyphilis
- The patient was started on IV penicillin 4 million units followed by a tremendous improvement of his mental status back to his baseline. He was then discharged to a facility to complete two weeks of penicillin and Tecovirimat.

CSF RESULTS

WBC	81
RBC	0
Glucose	59
Protein	68
VDRL	Positive
FTA ABS	Positive
RPR	Positive

DERMATOLOGICAL FINDINGS

- Patient's rash on soles of feet

- Patient's rash in/around hairline and facial area

DISCUSSION

- To the authors' knowledge, there are no existing case reports of patient with confirmed Monkeypox and neurosyphilis that contribute to encephalopathy.
- We highlighted the importance of inclusion of syphilis testing during a routine metabolic encephalopathy screen and in this case, in the context of Monkeypox.

REFERENCES

1. Kabuga, AI, El Zowalaty, ME. A review of the monkeypox virus and a recent outbreak of skin rash disease in Nigeria. J Med Virol. 2019; 91: 533- 540. https://doi.org/10.1002/jmv.25348
2. Eskild Petersen, Anu Kantele, Marion Koopmans, Danny Asogun, Adesola Yinka-Ogunleye, Chikwe Ihekweazu, Alimuddin Zumla, Human Monkeypox: Epidemiologic and Clinical Characteristics, Diagnosis, and Prevention, Infectious Disease Clinics of North America, Volume 33, Issue 4, 2019, Pages 1027-1043, ISSN 0891-5520, ISBN 9780323708456,https://doi.org/10.1016/j.idc.2019.03.001.