



Mpox Household Exposure Involving Children in a California Bay Area County: Building Trust in Public Health and Decreasing Stigma

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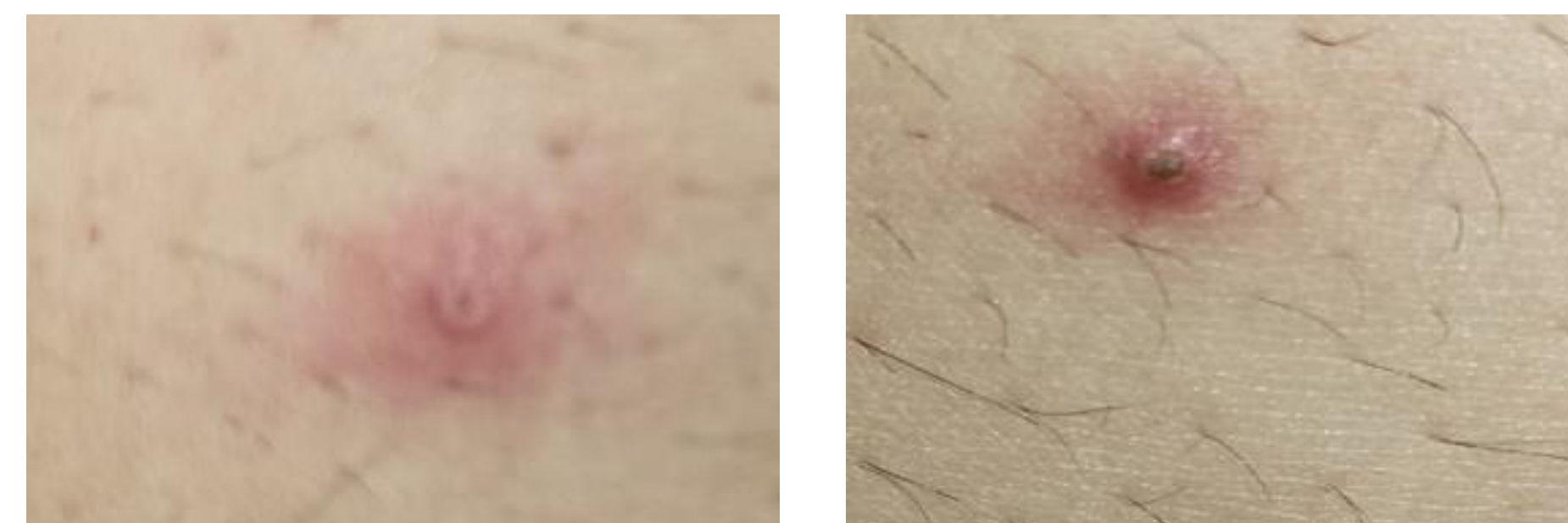
Background

- Mpox since 1970s West and Central Africa interhuman transmission largely non sexual close physical contact (sporadic, mostly children < 10yrs)
- 2022 outbreak: Clade IIb sexual contact efficient, direct skin and mucosal contact
- California 2022 mpox outbreak: 5,572 cases, approximately 20% of US case count; 0.3% of cases were among children <16 years old (Wendorf JID 2024)
- San Mateo County, Bay Area, CA (Population: 777,635)
 - 2022**
 - 85 mpox cases : 94% male, 40% Latino, 18% reported heterosexual orientation
 - 2023**
 - 11 mpox cases: 9/11 male, 6/11 Latino, 9/11 mpox unvaccinated ,6/11 diagnosed in Emergency Departments (ED)/Urgent Care.
- In CA, Secondary attack rate for children sharing households with mpox infected adults was 4.7% may be underestimated given low testing rates.
- Less severe infections in persons after 2 doses JYNNEOS than unvaccinated
- Real world vaccine effectiveness (VE) & safety JYNNEOS vaccine not studied persons < 18 yrs age
- In adults VE before exposure 36-75% 1 dose and 66-89% for 2 doses
- JYNNEOS recommended as PEP ideally within 4 days of exposure potentially up to 14 days
- < 200 doses JYNNEOS vaccine given to children < 6 yrs age (all PEP), number too small to evaluate VE
- No severe adverse events in persons < 18 yrs; younger persons may have received only a single dose vaccine (eg PEP while awaiting lab confirmation in close contact) best dose & schedule for children unknown (Brooks JID 2024)

Case Presentation

A 32-year-old Latin American born man presented to County STI clinic with myalgias, fatigue, intensely painful anal lesions, and dome-shaped fleshy papules on face, abdomen, and neck. Anal lesion swabs were mpox DNA positive and negative for *Chlamydia trachomatis*, *Neisseria gonorrhoeae*, and herpes simplex virus. He was HIV and Syphilis EIA negative. He reported one male and one female sex partner in the last 2 months and lived with a preschool and school age child. During the prior week, he had been evaluated twice in the County ED for fever, anal pain, and rectal bleeding but was not mpox tested. Case was unvaccinated for mpox and was not aware of mpox.

Disease intervention specialist (DIS) counseled on home isolation and arranged for food support while patient was not working. Due to the case's disclosure to child's school of mpox diagnosis, health department advised against notification being sent after school requested guidance. His female partner who had rectal pain and a neck papule and 2 children, one who had a nonspecific oral and buttock skin lesions were tested at the University ED. All household members' skin lesions, blood and urine were negative by mpox virus (MPXV) PCR. Female partner and children were offered orthopoxvirus vaccine through County Health.



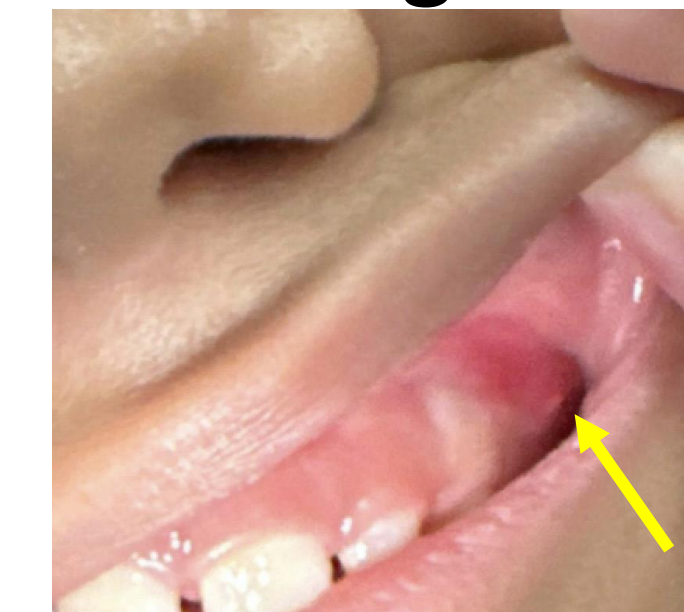
Index Case MPXV PCR Abdominal skin swab: **Detected**
MPXV PCR Anal swab: **Detected**

Female partner, household contact, neck papule



MPXV PCR Nasopharynx: Not detected
MPXV PCR Neck papule: Not detected
MPXV PCR Vaginal swab: Not detected
MPXV PCR Buttocks skin swab 1: Not detected
MPXV PCR Buttocks skin swab 2: Not detected
MPXV PCR Buttocks skin swab 3: Not detected
MPXV PCR Blood: Not detected
MPXV PCR Urine: Not detected

School age child, household contact, oral lesion



MPXV PCR Oral Lesion: Not detected
MPXV PCR Blood: Not detected

Preschool child, household contact, buttock lesions



MPXV PCR Oral Lesion: Not detected
MPXV PCR Buttocks skin swab: Not detected
MPXV PCR Right thigh skin swab: Not detected
MPXV PCR Face skin swab: Not detected
MPXV PCR Blood: Not detected
MPXV PCR Urine: Not detected

Case Follow-Up

- Index case treated with Tecovirimat 600mg PO bid x 2 weeks with improvement
- No mpox antimicrobial treatment for any household contact
- Orthopox vaccine for adult female partner
- Index case isolated from household contacts until all skin lesions healed (i.e. scabs fallen off, fresh skin layer at lesion site & other symptoms resolved for 48 hours)

Key Points

- Individuals not self-identifying as mpox at-risk population in education campaigns may not seek vaccination.
- EDs/urgent care are essential partners for mpox diagnosis.
- DIS' ability to develop rapport through disease education builds trust, reduces stigma and obtains exposure information in sensitive situations involving children.

Mpox Household Transmission Prevention Tools

California Department of Public Health:
<https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Mpox/Mpox-Consideration-for-Childcare-and-School-Settings.aspx>

Centers for Disease Control and Prevention:
<https://www.cdc.gov/poxvirus/mpox/if-sick/transmission.html>

<https://www.cdc.gov/poxvirus/mpox/clinicians/infection-control-home.html>

<https://www.cdc.gov/poxvirus/mpox/if-sick/cleaning-disinfecting.html>

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