CLINICAL PRESENTATION OF MPOX IN PEOPLE WITH AND WITHOUT HIV

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Victoria Pilkington[1,2], Killian Quinn[1], Lucy Campbell [1,2], Michael Brady[1], **Frank Post [1,2]**

1. King's College Hospital NHS Foundation Trust, London, UK; 2. King's College London, London, UK

BACKGROUND

- Early United Kingdom surveillance data revealed that people living with HIV (PLWH) were overrepresented among those with monkeypox (Mpox)
- It remains unknown whether Mpox infection is more severe in PLWH

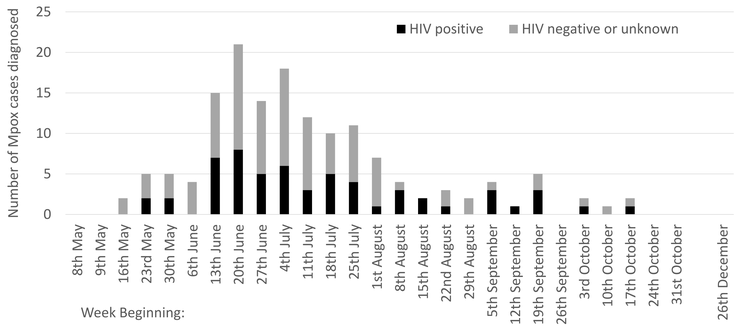

Figure 1: Graph illustrating timeline of Mpox cases diagnosed at King's College Hospital and affiliated clinics in South-East London, UK, stratified by HIV status.

METHODS

- All laboratory confirmed Mpox cases identified between May and December 2022 in one London hospital were identified via a search of electronic patient records and virology laboratory reporting systems
- Under existing clinical pathways, all patients with suspected Mpox underwent an initial assessment with diagnostic samples taken and a clinical decision made to admit to hospital or discharge home with isolation advice
- All outpatients with laboratory confirmed Mpox were followed up for virtual review, which included regular telephone reviews by sexual health clinicians until they were deemed to be recovering and safe for discharge
- We extracted demographic data, as well as clinical data including HIV status, location of skin lesions, presence of systemic symptoms. We also collected data on duration of illness and a need for hospitalisation as indicators of severity
- We compared the clinical presentation and severity of Mpox among people with and without HIV using T-tests (continuous outcomes) or by calculating risk ratios

Key findings:

People living with HIV had **similar clinical presentations** of Mpox as those without HIV, including **similar severity and duration of illness**

Reported Symptom	Whole Population (n=150)	HIV Negative (n=86)	HIV Positive (n=58)	Comparison of occurrence by HIV status
Systemic symptoms				
Any Systemic	128/150 (85.3%)	71/86 (82.6%)	51/58 (87.9%)	RR 1.07 (0.93 to 1.22)
Systemic Prodrome*	62/150 (41.3%)	31/86 (36.1%)	30/58 (51.72%)	RR 1.43 (0.99 to 2.09)
Sore Throat	25/150 (16.7%)	16/86 (18.6%)	7/58 (12.07%)	RR 0.65 (0.28 to 1.48)
Fever	94/150 (62.7%)	52/86 (60.5%)	38/58 (65.5%)	RR 1.08 (0.84 to 1.40)
Headache	26/150 (17.3%)	18/86 (20.9%)	7/58 (12.1%)	RR 0.58 (0.26 to 1.29)
Lymphadenopathy	79/150 (52.7%)	49/86 (57.0%)	27/58 (46.5%)	RR 0.82 (0.59 to 1.14)
Myalgia	34/150 (22.7%)	14/86 (16.3%)	16/58 (27.6%)	RR 1.69 (0.90 to 3.20)
Dermatological manifestations				
Genital Lesion(s)	88/150 (58.7%)	58/86 (67.4%)	27/58 (46.5%)	RR 0.69 (0.51 to 0.94)
Perianal Lesion(s)	39/150 (26.0%)	19/86 (22.1%)	19/58 (32.8%)	RR 1.48 (0.86 to 2.55)
Head/Neck/Face	48/150 (32.0%)	24/86 (27.9%)	23/58 (39.7%)	RR 1.42 (0.89 to 2.26)
Extra-Genital Lesions**	103/150 (68.7%)	55/86 (64.0%)	43/58 (74.1%)	RR 1.16 (0.93 to 1.44)

Table 1: Symptoms and dermatological manifestations of Mpox in 150 individuals and stratified by HIV status. Risk ratios, with 95% confidence intervals, are expressed as HIV positive relative to HIV negative.
*Systemic symptoms reported to have occurred prior to any dermatological lesions
**Lesion(s) anywhere other than genitals or perianal area

RESULTS

- 150 laboratory confirmed cases of Mpox were identified, of which 148 (98.7%) were diagnosed in cis men, with one cis women and one trans man. 139 (92.7%) were in men who have ex with men
- Forty-two (28.0%) participants reported an STI in the past year, of which 64% were gonorrhea. Thirty-eight (25.3%) had at least one other STI at the time of Mpox diagnosis, with gonorrhea being the most common STI (47%)
- HIV status was available for 144 (96%) participants, 58 (40.3%) were HIV positive. Of those people living with HIV, 47 (81.0%) had an undetectable VL (<200 copies/mL) and the mean CD4 cell count was 513 (SD 269) cells/mm^3
- The clinical presentation of Mpox, both in terms of systemic symptoms and distribution of skin lesions, was similar for people with HIV and without HIV, although genital lesions were somewhat less common in people with HIV (Table 1)
- Indicators of severity of Mpox were also similar, with average time under virtual follow up, and proportions of people requiring hospital admission, being similar in those with and without HIV (Table 2)
- No deaths, and no life-threatening complications such as encephalitis were recorded

Outcome (Indicator of Severity)	HIV Negative cases	HIV Positive cases	Measure of Association	P value
Mean (95%CI) time from symptom onset to discharge	15.4 days (13.9 to 17.0)	17.1 days (12.7 to 21.5)	Mean Difference -1.7 days (-5.6 to 2.2)	0.39
Mean (95%CI) time under follow up (days)	9.0 days (8.0 to 10.1)	11.7 days (7.5 to 15.8)	Mean Difference -2.7 days (-6.1 to 0.8)	0.13
Requiring review in Emergency Department	22/86 (25.6%)	21/58 (36.2%)	Risk Ratio 1.41 (0.86 to 2.33)	0.17
Admitted to hospital	8/86 (9.3%)	11/58 (19.0%)	Risk Ratio 2.04 (0.87 to 4.76)	0.09

Table 2: Table summarising indicators of Mpox severity for people with and without HIV.

CONCLUSIONS

- In this cohort of people with Mpox, there was a high prevalence of well-controlled HIV co-infection
- People with HIV experienced a similar clinical presentation of Mpox to people without HIV. We find no evidence that people with HIV experienced more severe Mpox, with similar duration of illness and rates of hospital admission

Correspondence to vicki.pilkington@nhs.net

PRESENTED AT THE CROI CONFERENCE | 19-22 FEB 2023