CHARACTERISTICS OF THE 2022 MPOX OUTBREAK IN A SOUTHEASTERN U.S. CITY

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BACKGROUND

- In Atlanta, Georgia, the 2022 mpox outbreak disproportionately impacted people who are Black and people with HIV (PWH) compared to other areas. Here, we describe demographic and clinical manifestations of mpox in Atlanta.

METHODS

- We performed a retrospective cohort study with manual chart abstractions of 281 individuals who tested positive for mpox at two academic medical centers in Atlanta between 6/1/2022 and 10/7/2022.
- We use descriptive statistics to summarize demographic and clinical characteristics and Fisher's exact testing to explore the significance of categorical associations between HIV indices and mpox presentations. Displayed is our interim data analysis; future analysis will include multivariate modeling.

RESULTS

- Demographics, HIV indices, and clinical findings are presented in Table 1. Bivariate associations between HIV indices and clinical variables are shown in Table 2.
- Of 230 people with an identified suspected mpox exposure, 211 (91.7%) reported recent sexual contact and 96% reported sex with men. A concurrent syphilis diagnosis occurred in 46 (16.4%) people and other sexually transmitted infections in 53 (18.9%).
- No deaths were observed in our study time frame.

PWH with VL ≥ 200 c/mL with mpox had higher hospitalization rates and more frequent complications including bacterial superinfections than PWH with suppressed VL < 200 c/mL.

CONCLUSIONS

- Clinical presentation of mpox in Atlanta was similar to other reports. However, our cohort had a higher burden of HIV co-infection. Severe mpox disease was observed at higher frequency in individuals with uncontrolled HIV, indicating an urgent need to better understand the pathogenesis of HIV-mpox interactions and to develop better prevention and treatment options for PWH.

Table 2: Associations between HIV indices and clinical variables

	HIV Viral Load: ≥ 200 c/mL (vs. < 200 c/mL)			CD4+ Count: < 200 c/µL (vs. ≥ 200 c/µL)		
	Odds Ratio	95% CI	p-value	Odds Ratio	95% CI	p-value
Rash: vesicular/ pustular	0.65	(0.35- 1.21)	p = 0.2	**0.31**	**(0.14- 0.70)**	**p = 0.005**
Rash: ulcerative	1.35	(0.69- 2.66)	p = 0.3	**2.92**	**(1.27- 6.75)**	**p = 0.01**
Bacterial superinfection: cellulitis/ abscess	**2.81**	**(1.03- 7.65)**	**p = 0.04**	1.97	(0.63- 6.14)	p = 0.3
Delayed lesion healing > 4 weeks	1.30	(0.34- 5.01)	p = 0.7	**4.43**	**(1.04- 18.79)**	**p = 0.05**
Hospitalization	**6.04**	**(2.80- 13.06)**	**p < 0.001**	**2.56**	**(1.12- 5.83)**	**p = 0.04**
Hospital length of stay: > 10 days	0.80	(0.13- 5.08)	p = 1.0	**Infinity**	**N/A**	**p < 0.001**

Table 1: Demographics, HIV indices, and clinical findings

	Total Population n = 281 (% or IQR)	PWH N = 234 (% or IQR)
Demographics		
Median age (years)	35 (30-41)	35 (30-41)
Gender		
• Male- cisgender	271 (96.4%)	225 (96.2%)
• Female- transgender	9 (3.2%)	9 (3.8%)
• Female- cisgender	1 (0.4%)	0 (0%)
Race		
• Black	245 (87.2%)	213 (91.0%)
• Latinx	15 (5.3%)	10 (4.3%)
• White	8 (2.8%)	2 (0.9%)
HIV Indices		
HIV Status		
• Persons with HIV (PWH)	234 (83.3%)	234 (100%)
• Persons without HIV (PWoH)	41 (14.6%)	--
• Unknown	6 (2.1%)	--
Median CD4+ (cells/µL)	--	408 (246-552)
• CD4+ ≥ 200	--	128 (54.7%)
• CD4+ < 200	--	32 (13.7%)
• Unknown	--	74 (31.6%)
Median HIV viral load (copies/mL)	--	Undetectable (U-575)
• VL < 200	--	107 (45.7%)
• VL ≥ 200	--	67 (28.6%)
• Unknown	--	60 (25.6%)
Clinical Presentation		
Rash character		
• Pustular	120 (42.7%)	100 (42.7%)
• Papular	94 (33.5%)	78 (33.3%)
• Ulcerative	67 (23.8%)	57 (24.4%)
• Vesicular	60 (21.4%)	50 (21.4%)
Mucosal lesions		
• Pharyngeal	59 (21.0%)	53 (22.6%)
• Anorectal	58 (20.6%)	52 (22.2%)
• Urethral	22 (7.8%)	16 (6.8%)
• Ocular	2 (0.7%)	2 (0.9%)
Bacterial superinfection: cellulitis/ abscess	28 (10.0%)	18 (7.7%)
Clinical Outcomes		
Hospitalized	48 (17.1%)	41 (17.5%)
Median hospital length-of-stay (days)	5 (3-7)	5 (3-7)
Delayed lesion healing > 4 weeks	9 (3.2%)	9 (3.8%)

ADDITIONAL KEY INFORMATION

- The authors declare no relevant conflicts of interest.
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