One-year review of mpox in Hong Kong

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BACKGROUND

Hong Kong introduced the mpox vaccination programme, and saw its first mpox case in September 2022. Contrary to the global data, we did not observe a surge until July 2023. The delay was likely contributed by the strict travel restrictions implemented locally during the COVID-19 pandemic. This study aims to describe our experience with the mpox cases in Hong Kong.

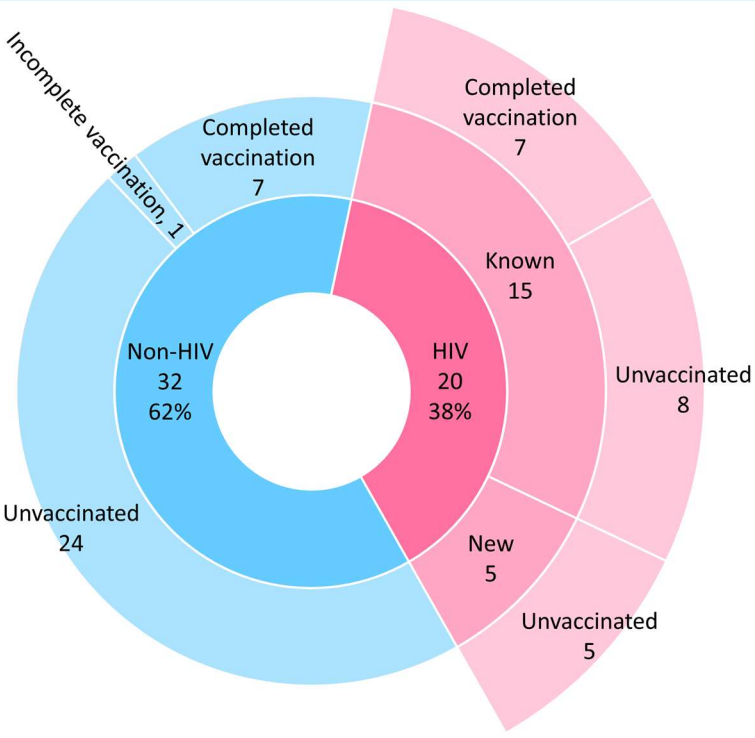
METHOD

This retrospective descriptive study was performed in Princess Margaret Hospital, the designated Infectious Disease Centre in Hong Kong which provided inpatient care for all laboratory confirmed cases of mpox, between January 2023 and December 2023. Electronic patient record and case notes were reviewed, and data was analysed with t-test or Mann-Whitney U test.

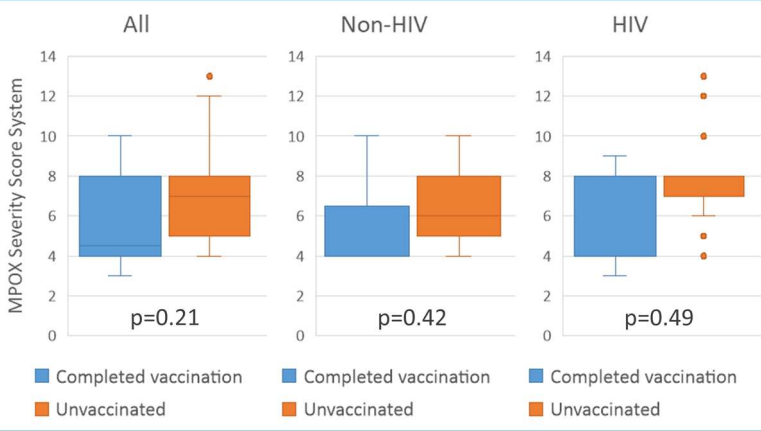
RESULTS

Fifty-two patients were confirmed positive for mpox PCR on lesion swab. All cases were men, (median age of 37 years). 90% were Chinese. All but one reported sexual encounter prior to symptom onset, of which 88% reported sex with male, 6% with female, and the rest with inconsistent history. 73% (n=37) were casual sexual encounters, 33% (n=17) had multiple sexual partners, and one reported encounter with different commercial sex workers. One case reported no sexual encounter, but was speculated to have acquired the infection via fomites during his holiday in Thailand. The majority of the cases (71%) were unvaccinated (graph 1). Out of the fifty-two cases, 15 had known HIV and were on ART, while 5 were newly diagnosed with HIV upon their presentation with mpox. The median MPOX Severity Score System (MPOX-SSS) (graph 2) were 5.5 and 7.5 for non-HIV and HIV patients (p=0.10); whereas those who completed the two-dose regime with JYNNEOS compared to the unvaccinated, the median was 4 and 7 respectively (p=0.08). All three patients treated with tecovirimat were unvaccinated and HIV positive, of which two patients were newly diagnosed with CD4 below 200 cells/uL. One case had relapsed mpox infection, and received concomitant cidofovir with a second course of tecovirimat. There was no fatality.

Graph 1: Vaccination Status



Graph 2: MPOX-SSS between HIV and non-HIV, and their vaccination status



CONCLUSION

Patients with HIV and especially those unvaccinated and not yet started on ART, are at risk of severe or disseminated mpox. Our cohort was unfortunately too small, and did not demonstrate any statistical significance between disease severity and patients with HIV or with no vaccination. Screening for HIV in those presenting with mpox infection remains to be a crucial diagnostic opportunity. It is also imperative to sustain efforts to enhance vaccination coverage among vulnerable groups.

Table 1: Disease severity and vaccination status

	Completed vaccination (n=14)	Unvaccinated (n=37)
Number of active lesions		
- 0	1 (0.07)	1 (0.03)
- 1-9	11 (0.79)	22 (0.59)
- 10-99	2 (0.14)	14 (0.38)
Extend of body involvement[1]		
- 1 to 3 areas	12 (0.86)	18 (0.49)
- 4 to 6 areas	2 (0.14)	14 (0.38)
- 7 to 9 areas	0 (0.00)	4 (0.11)
- 10 to 12 areas	0 (0.00)	1 (0.03)
Presence of confluent lesions >2cm	1 (0.07)	3 (0.08)
Treatment of secondary bacterial infection	3 (0.21)	12 (0.32)
Affected mucosal areas[2]		
- None	8 (0.57)	29 (0.78)
- 1 area	0 (0.00)	0 (0.00)
- 2 areas	6 (0.43)	6 (0.16)
- 3 areas	0 (0.00)	2 (0.05)
- 4 areas	0 (0.00)	0 (0.00)
Analgesia		
- Oral (over the counter)	2 (0.14)	13 (0.35)
- Oral (prescribed)	1 (0.07)	3 (0.08)

Table 2: Subanalysis

	Non-HIV		HIV	
	Completed vaccination (n=7)	Unvaccinated (n=24)	Completed vaccination (n=7)	Unvaccinated (n=13)
Number of active lesions				
- 0	0 (0.00)	1 (0.04)	1 (0.14)	0 (0.00)
- 1-9	6 (0.86)	15 (0.63)	5 (0.71)	7 (0.54)
- 10-99	1 (0.14)	8 (0.33)	1 (0.14)	6 (0.46)
Extend of body involvement[1]				
- 1 to 3 areas	6 (0.86)	13 (0.54)	6 (0.86)	5 (0.38)
- 4 to 6 areas	1 (0.14)	9 (0.38)	1 (0.14)	5 (0.38)
- 7 to 9 areas	0 (0.00)	2 (0.08)	0 (0.00)	2 (0.15)
- 10 to 12 areas	0 (0.00)	0 (0.00)	0 (0.00)	1 (0.08)
Presence of confluent lesions >2cm	0 (0.00)	1 (0.04)	1 (0.14)	2 (0.15)
Treatment of secondary bacterial infection	2 (0.29)	7 (0.29)	1 (0.14)	5 (0.38)
Affected mucosal areas[2]				
- None	5 (0.71)	21 (0.88)	3 (0.43)	8 (0.62)
- 1 area	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
- 2 areas	2 (0.29)	3 (0.13)	4 (0.57)	3 (0.23)
- 3 areas	0 (0.00)	0 (0.00)	0 (0.00)	2 (0.15)
- 4 areas	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Analgesia				
- Oral (over the counter)	1 (0.14)	9 (0.38)	1 (0.14)	4 (0.31)
- Oral (prescribed)	0 (0.00)	2 (0.08)	1 (0.14)	1 (0.08)

Adapted from MPOX Severity Score System. [1]Body areas were divided into head/neck, chest/abdomen, back, groin/buttock/anus, left arm, left hand, right arm, right hand, left leg, left foot, right leg, and right foot. [2]Mucosal areas were divided into anorectal, oropharyngeal, genital, and ocular.