MPOX DNA CLEARANCE IN SEMEN OVER SIX MONTHS FOLLOW-UP

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BACKGROUND

During mpox outbreak, sexual intercourse demonstrates to be a well-established way of transmission.

WHO recommends avoiding any sexual contact among mpox cases during the 21-day monitoring period, regardless of their symptoms.

However, it is unknown whether seminal fluids might represent a viral reservoir.

Therefore, we aimed at evaluating mpox DNA clearance in semen samples of people with mpox infection over six months of follow-up.

METHODS

This is an observational, prospective, single-center study of outpatients diagnosed with mpox in IRCCS San Raffaele Hospital in Milan, Italy, between May 2022 and October 2022.

Samples were analyzed by a real-time polymerase chain reaction (RT-PCR) to detect the presence of non-variola DNA; then a specific RT-PCR targeting mpox virus DNA was used for confirmation.

The primary endpoint was time from the first positive test of seminal fluid (baseline, BL) to viral DNA clearance.

Follow-up accrued from BL until the date of most recent test of seminal fluid (performed within 6 months).

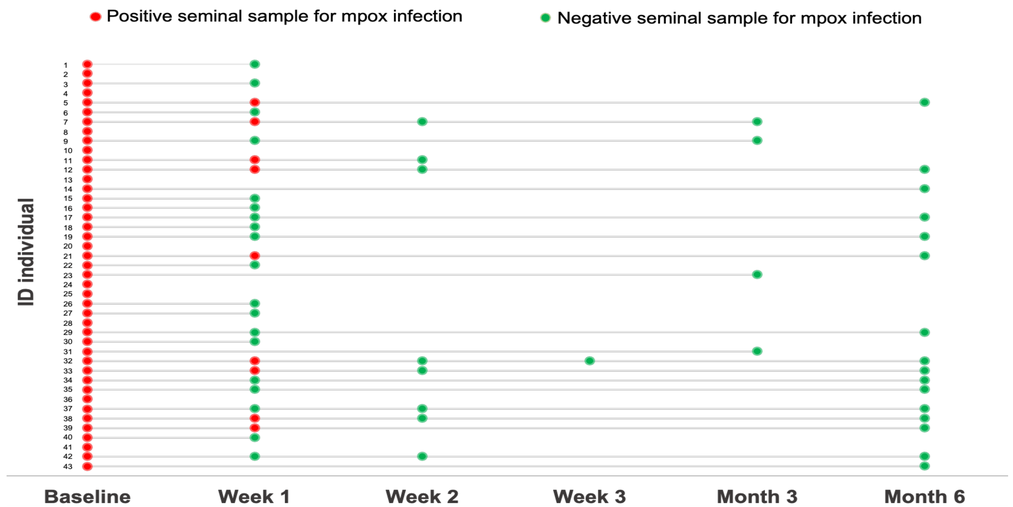
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Viral DNA clearance in seminal fluid samples from people diagnosed with **mpox** infection was mostly observed **within 2 weeks since first positive test**

Figure 1. Follow-up since first positive mpox seminal sample within six months



CONCLUSIONS

These preliminary findings from this cohort of individuals highlight that viral DNA clearance in seminal fluid samples from people diagnosed with mpox infection was mostly observed within 2 weeks since first positive test.

These findings suggest that semen testing and prolonged use of condoms after mpox infection may be necessary.

RESULTS

Patient's baseline characteristics are summarized on **Table 1.** Overall, 164 seminal fluid samples were collected from 140 people diagnosed with mpox infection; mpox DNA was detected in seminal fluid of 43 people with a BL median cycle thresholds of 34 (IQR 31-36).

At mpox diagnosis, median age was 36 (IQR 34-42) years, 98% were men who had sex with men (MSM), 23% had concomitant sexually transmitted infections (7 *C. trachomatis*, 4 *N. gonorrhoeae*, 2 syphilis) and 28% were living with HIV infection.

To assess viral clearance in seminal fluid, 58 further seminal samples were collected in 32 individuals (11 people has only BL sample).

Viral clearance was observed within 6 months in all these individuals in a median time of 10.5 days (IQR 7-33); 19/28 seminal samples tested within 1 week were negative (68%), 25/28 (89%) tested negative within 2 weeks, 26/29 (90%) within 3 months (**Figure 1).**

Table 1. Patients' descriptive characteristic

VARIABLES	N = 140
AGE (median, IQR)	37 (33, 43)
MALE (n, %)	137 (98%)
MSM (n, %)	134 (96%)
TRAVEL ABROAD (n, %)	35 (25%)
CLOSE CONTACT WITH MPOX CASES (n, %)	49 (35%)
PREVIOUS SMALLPOX VACCINATION (n, %)	22 (16%)
HIV (n, %)	66 (47%)
HCV (n, %)	10 (7%)
HBV (n, %)	1 (1%)
IMMUNODEPRESSION OTHER THAN HIV (n, %)	3 (2%)
PrEP (n, %)	43 (31%)