MPOX AMONG MSM IN THE NETHERLANDS PRIOR TO MAY 2022, A RETROSPECTIVE STUDY

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BACKGROUND

Since May 2022 over 20.000 monkeypox (mpox) cases have been reported from 29 EU/EEA countries, predominantly among men who have sex with men (MSM). With over 1200 cases and a crude notification rate of 70.7 per million population, the Netherlands was in the top 5 European countries most affected. The first national case was reported on May 10th, yet potential prior transmission remains unknown. **We performed a retrospective study to elucidate whether undetected transmission of human monkeypox virus (hMPXV) occurred prior to the first reported case in the two largest cities in the Netherlands, Amsterdam and Rotterdam.**

METHODS

Samples: stored anorectal samples that were positive for Chlamydia or Gonorrhoea (Ct/Ng) and all collected ulcer samples from visitors to the two largest Centers for Sexual Health in the Netherlands
Period: February 14 to May 18, 2022
Test: an in-house developed and validated qPCR for hMPXV.
Phylogenetic analysis: Genbank sequences and the Dutch strain generated as part of this study.

Among 401 samples from Centers for sexual health, stored preceding the first mpox case, only two samples, collected in the first week of May 2022 contained hMPXV

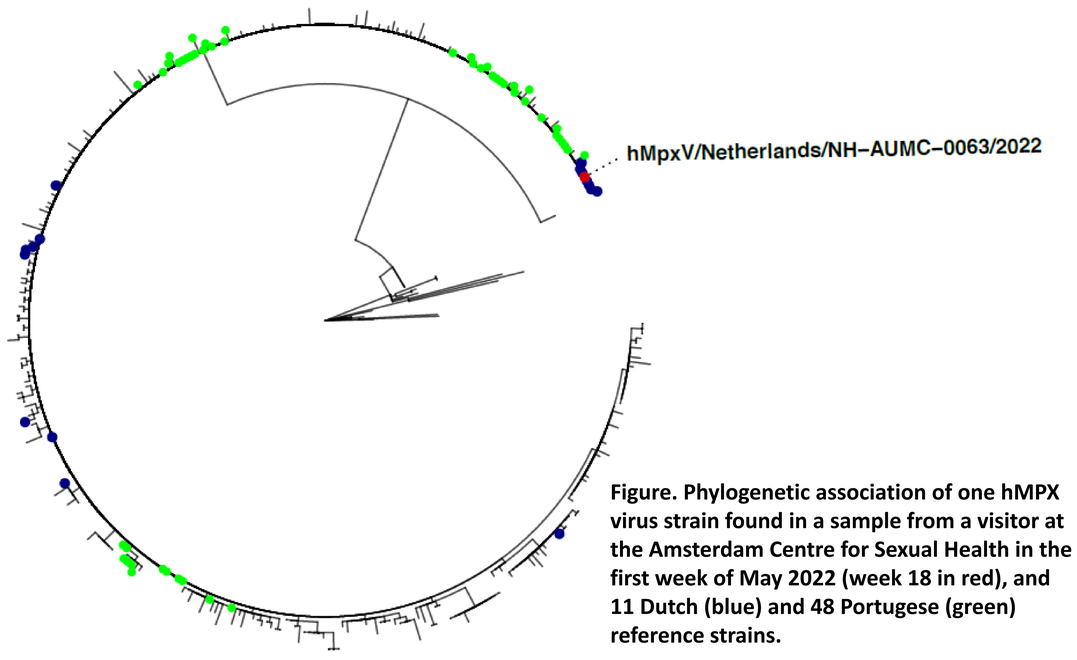

Figure. Phylogenetic association of one hMPX virus strain found in a sample from a visitor at the Amsterdam Centre for Sexual Health in the first week of May 2022 (week 18 in red), and 11 Dutch (blue) and 48 Portugese (green) reference strains.

RESULTS

We tested **263** (169 in Amsterdam; 94 in Rotterdam) **anorectal samples** that were positive for Ct/Ng and **138 ulcer samples** (126 Amsterdam, 12 Rotterdam) on the presence of hMPXV. **Two** hMPXV positive samples were identified, one from an anorectal sample and one from an ulcer sample, both collected in **the first week of May 2022 (week 18)**. Both samples were from MSM, one had symptoms of proctitis and one had multiple ulcers. The anorectal hMPXV positive sample was successfully sequenced. This sequence, like all other Dutch sequences belonged to the clade IIb cluster (B.1) with a close relation to international strains of hMPXV (Figure).

CONCLUSIONS

The first mpox cases in the Netherlands coincided with the first cases reported in the United Kingdom, Spain and Portugal. We found **no evidence of widespread hMPXV transmission in Dutch sexual networks of MSM prior to May 2022**. Likely, the hMPXV outbreak expanded across Europe within a short period in the spring of 2022 in an international highly intertwined network of sexually active MSM.

ADDITIONAL KEY INFORMATION

The full manuscript “Human Monkeypox Virus outbreak among MSM in Amsterdam and Rotterdam, the Netherlands: no evidence for undetected transmission prior to May 2022 in a retrospective study”, is published on medRxiv on November 20, 2022.