Haemodialysis is a risk factor for hepatitis C virus (HCV) transmission. Two patients receiving haemodialysis in a Dutch dialysis unit in The Hague were found to seroconvert to HCV in December 2016 after the yearly routine control for blood-borne viruses” Heikens et al (2018).

Abstract:

Background: Haemodialysis is a risk factor for hepatitis C virus (HCV) transmission. Two patients receiving haemodialysis in a Dutch dialysis unit in The Hague were found to seroconvert to HCV in December 2016 after the yearly routine control for blood-borne viruses. Following the presumed time of infection, three chronically infected HCV patients were identified as possible index cases.

Aim: To confirm inter-patient transmission and to identify the source.

Methods: Molecular investigation and review of medical records were performed.

Findings: Both of the incident cases and one of the three possible index cases were demonstrated to be infected with HCV genotype 2b based on 5’UTR sequencing. Epidemiological relatedness between these viruses was further investigated by sequencing of the NS5A region. Phylogenetic analysis clearly identified the incident cases and the index case to represent a cluster distinct from unrelated controls with HCV genotype 2b. Detailed
review of the medical records identified two possible incidents that might have resulted in the HCV transmission cases: contamination of the venous pressure-sensing port due to high venous pressures or incomplete compliance with infection control precautions of the unit staff during handling of two incidents, that occurred at the same time in a single haemodialysis session with the index patient as well as both incident cases present.

Conclusion: This study demonstrates that detailed incident recording in combination with state-of-the-art molecular investigations such as sequencing of the NS5A region resulted in unravelling a set of two HCV transmissions that occurred at an haemodialysis unit.

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