Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

behavior in the last decade among MSM in Amsterdam may have balanced the positive effects of the targeted vaccination program.

O13 Neurological disease associated with seasonal B19 virus infection in the United Kingdom

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Background: Erythrovirus B19 (formerly parvovirus B19), is the cause of the common childhood illness erythema infectiosum (EI). B19V is rarely considered as a cause of neurological illness although there have been isolated case reports describing neurological symptoms in patients during or following EI. A recent retrospective study suggests that the virus is present in the CSF of almost 5% of undiagnosed paediatric encephalitis/meningitis cases in the United Kingdom. We tested cerebrospinal fluid (CSF) samples from paediatric and adult patients, collected during periods of high and low B19V incidence.

Patients Details and Methods: A total of 227 CSF samples sent to Manchester Royal Infirmary Clinical Virology Laboratory for testing for suspected viral meningoencephalitis were tested. Of these 138 were collected in the high incidence and 89 in the low incidence period. All CSF samples were tested using B19V-specific nested DNA PCR and all positive CSF samples were tested for the presence of anti-B19V antibodies using immunoblot test.

Results: Ten of 227 CSF samples were positive for B19V DNA (4.4%). In the high B19V incidence cohort, 9/138 samples (6.5%) were positive. In the low incidence cohort 1/89 cases (1.1%) were positive. Anti-B19V antibody (IgG) was detected in four out of ten B19V positive CSF samples suggesting that a functioning immune response against the virus was occurring.

Conclusions: B19V is associated with neurological illness in both children and adults. The finding of a higher incidence of B19V DNA positive CSF during community outbreaks suggests the virus may be an unrecognised cause of meningoencephalitis.

O14 HHV-6 DNA in CSF and diagnosis of encephalitis

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Background and Aims: The prevalence and concentration of HHV-6 DNA in the cerebrospinal fluid (CSF) of the immunocompetent in primary infection was compared with that in viral chromosomal integration.

Methods: Samples from 510 immunocompetent individuals with suspected encephalitis were tested. HHV-6 DNA concentration (log_{10} copies/ml) was measured in CSF, serum and blood using PCR. Primary infection was defined by antibody seroconversion and/or low concentration HHV-6 DNA in a seronegative serum. Chromosomal integration was defined by high concentration viral DNA in serum or blood.

Results: The prevalences of CSF HHV-6 DNA in primary infection and chromosomal integration were 2.5% and 2.0% respectively in young children (<2 years) and 0% and 1.3% respectively in the older children/adults. The mean concentration of CSF HHV-6 DNA in children with primary infection was significantly lower than that in patients with viral chromosomal integration. Only HHV-6B DNA was found in primary infection whereas in viral integration both HHV-6A and B were detected.

Conclusions and Discussion: Apart from primary infection, chromosomal integration is the most likely cause of HHV-6 DNA in the CSF of the immunocompetent. In such cases, viral chromosomal integration should be excluded before diagnosing encephalitis.

O15 Identification of new pathogens involved in infectious uveitis

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Background: Uveitis is an inflammation of the uvea, including the iris, the ciliary body, the choroid and the retina. In approximately 20% of cases uveitis is caused by a systemic disease, whereas in 30% the inflammation is the result of an intraocular infection, with Toxoplasma gondii, Herpes simplex virus, Varicella zoster virus and Cytomegalovirus being the most common causes. In the remaining 50% of cases, rapid discrimination between infectious and non-infectious uveitis is of major importance for patient management, since these two conditions have entirely different treatment regimens and visual prognoses. The purpose of this study was to identify other pathogens involved in uveitis.

Methods: Ocular fluid samples from 78 patients with an undiagnosed uveitis were investigated by real-time PCR for the presence of Adenovirus, Human herpes virus 6, Epstein–Barr virus, Coronaviruses, Influenzaviruses, Parainfluenzaviruses, Enteroviruses, Parechoviruses, Respiratory syncytial virus, Human metapneumovirus and Rubella virus. In addition, aqueous humor of 32 patients with Fuchs heterochromic iridocyclitis (FHI), a chronic intraocular inflammation, were examined for intraocular antibody production against Rubella virus.

Results: Of 78 patients, one patient with posterior uveitis was positive for Rubella virus and four patients with anterior uveitis were positive for Parechovirus. Analysis of the clinical data of the latter suggested that Parechovirus is involved in keratouveitis. Moreover, 30 of 32 (94%) patients with FHI, but none of the control subjects, had intraocular antibody production against Rubella virus.

Conclusions: Parechovirus appears to play an important role in keratouveitis. Furthermore, these studies confirm that Rubella virus is associated with FHI.

O16 Human cytomegalovirus-specific CD4+ and CD8+ T-cells in organ transplant recipients

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Objective: To evaluate human cytomegalovirus (HCMV)-specific CD4+ and CD8+ T-cell kinetics in solid organ transplant recipients and the potential impact of monitoring HCMV-specific immune response on management of HCMV infection.

Methods: Absolute and HCMV-specific CD4+ and CD8+ T-cell counts were monitored in 38 solid organ (20 heart, 9 lung, and 9 kidney) transplant recipients during first year after transplantation by a novel assay based on T-cell stimulation with HCMV-infected autologous dendritic cells. Patients were enrolled in a pre-emptive therapy protocol based on administration of antiviral therapy upon reaching either antigenemia or DNAemia cutoff values.

Results: According to the pattern of T-cell restoration occurring either within the first month after transplantation or later, patients were classified as either early ($n = 21$) or late responders ($n = 17$). HCMV-specific CD4+ and CD8+ T-cell counts were consistently lower in late compared to early responders from baseline through six months after transplantation. In addition, in late responders, while HCMV infection preceded immune restoration, HCMV-specific CD4+ restoration was significantly delayed with respect to CD8+ T-cell restoration. The number of HCMV-specific CD4+ and CD8+ T-cells detected prior to transplantation significantly correlated with time to T-cell immunity restoration, in that higher HCMV-specific T-cell counts predicted earlier immune restoration. Clinically, the great majority of early responders (18/21, 85.7%) underwent self-resolving HCMV infections ($p = 0.004$), whereas the great majority of