



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.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

Letter to the Editor

Absence of Melaka-virus in European children with respiratory disease

In July 2007 Chua et al. from Malaysia and Australia detected a previously unknown member of the reovirus family (respiratory enteric orphan viruses) which was named Melaka-virus. This virus was associated with acute respiratory disease in the 39-year-old male index patient and also somewhat later in two of his family members (Chua et al., 2007). Furthermore, 14 out of 109 human volunteers living on the same island as the index patients proved positive for antibodies against Pulau-virus that is closely related with Melaka-virus.

As our group is interested in the epidemiology of newly discovered viruses such as HMPV, human Bocavirus, and newly discovered Coronaviruses, in the cohort of hospitalized pediatric and adult high risk patients (2–5) we have screened 225 nasopharyngeal washes that were previously RT-PCR tested for RSV, HMPV, human Coronaviruses (NL63, OC43, 229E, HKU1, and SARS), and human Bocavirus (detailed protocols available on request and previously published in: 2–5) for the presence of Melaka-virus RNA. The RT-PCR detection protocol was kindly provided by Dres. Chua and Wang who initially described Melaka-virus (Chua et al., 2007).

In total 29 (12.66%) out of the 225 samples tested were positive for RSV, 1 was positive for HMPV, 1 was positive for HMPV, 1 was positive for Coronaviruses, 1 was positive for Influenza virus A, and 1 (0.44%, each) was positive for human Bocavirus. No double infections with any of the tested viruses were observed. Melaka-virus RNA was not found in any of the samples tested. Although the lack of a Melaka-virus RNA positive sample does not imply that it is absent in our clinical samples since it could have been below the detection limit of the RT-PCR assay, we can still conclude that Melaka-virus plays no or only a minor role in hospitalized European pediatric patients. This conclusion is based upon the negative RT-PCR results. In similar epidemiological studies that we have performed for other viruses, the phenomenon that a newly described virus was not found in patient populations with corresponding symptoms was not observed. In other words, following the first descriptions of HMPV, human Bocavirus, Coronaviruses NL63 and HKU1,

at least a small percentage of patients turned out to be infected by these new viruses (Kupfer et al., 2006; Muller et al., 2007; Volz et al., 2007; Wilkesmann et al., 2006) contributing to the common cold. In contrast, no positive results were obtained for Melaka-virus which is suspected to be transmitted by bats as a zoonotic pathogen.

Taking into account that none of our patients had known or suspected contact with bats, nor travelled to a region in which Melaka-virus may be endemic, our results give rise to the hypothesis by Chua et al. (2007) that Melaka-virus may indeed be transmitted by bats rather than common cold pathogens. We finally conclude that Melaka-virus testing should preferably be carried out in populations with suspected contact to the virus such as inhabitants of the endemic regions or air travellers with symptoms of respiratory disease (Luna et al., 2007).

Acknowledgements

This work was partially supported by research grants from the Else Kröner-Fresenius Stiftung (P15/07//A22/07) and the European Commission (LSHM-CT-2006-037276).

References

- Chua KB, Cramer G, Hyatt A, Yu M, Tompang MR, Rosli J, et al. A previously unknown reovirus of bat origin is associated with an acute respiratory disease in humans. *Proc Natl Acad Sci USA* 3 July 2007;104(27):11424–9.
- Kupfer B, Vehreschild J, Cornely O, Kaiser R, Plum G, Viazov S, et al. Severe pneumonia and human bocavirus in adult. *Emerg Infect Dis* October 2006;12(10):1614–6.
- Luna LK, Panning M, Grywna K, Pfefferle S, Drosten C. Spectrum of viruses and atypical bacteria in intercontinental air travelers with symptoms of acute respiratory infection. *J Infect Dis* 1 March 2007;195(5):675–9.
- Muller A, Kupfer B, Vehreschild J, Cornely O, Kaiser R, Seifert H, et al. Fatal pneumonia associated with human metapneumovirus (HMPV) in a patient with myeloid leukemia and adenocarcinoma in the lung. *Eur J Med Res* 26 April 2007;12(4):183–4.
- Volz S, Schildgen O, Klinkenberg D, Ditt V, Muller A, Tillmann RL, et al. Prospective study of Human Bocavirus (HBoV) infection in a pediatric university hospital in Germany 2005–2006. *J Clin Virol* November 2007;40(3):229–35.

Wilkesmann A, Schildgen O, Eis-Hubinger AM, Geikowski T, Glatzel T, Lentze MJ, et al. Human metapneumovirus infections cause similar symptoms and clinical severity as respiratory syncytial virus infections. *Eur J Pediatr* 2006;165(7):467–75.

Verena Schildgen
Elena Rüngeler
Ramona Tillmann
Oliver Schildgen *

*University of Bonn, Institute for Virology,
Sigmund-Freud-Strasse 25, D-53105 Bonn, Germany*

* Corresponding author. Tel.: +49 228 28711697;
fax: +49 228 28714433.

*E-mail address: schildgen@virology-bonn.de
(O. Schildgen)*

18 January 2008