

**Evidence of Interspecies Transmission and Reassortment  
Among Avian Group A Rotaviruses**

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Group A rotaviruses are the leading cause of diarrhoea of infants and young children world-wide. They are also important enteric pathogens for many animal species. Transmission of rotaviruses between animals and humans seems to be a rare event; however, it significantly contributes to the genetic variability of human rotaviruses and to the development of novel strains. Due to the segmented nature of the rotavirus genome consisting of 11 segments of double-stranded RNA, reassortment events may occur. Although a great variety of rotaviruses have also been detected in avian species, data on genomic sequences and on interspecies transmission of these viruses are scarce. Using RT-PCR, the entire coding sequences for the capsid proteins VP4, VP6 and VP7, and for the non-structural protein NSP5 of group A rotaviruses isolated from six chickens and two turkeys were determined. Sequence analysis generally indicated that avian rotaviruses are only distantly related to mammalian rotaviruses and that isolates from chicken and turkey cluster in separate branches. For one chicken isolate, however, sequences of all analysed segments consistently clustered together with the turkey-like sequences indicating virus transmission from turkey to chicken. For another chicken isolate, a VP4-encoding region with only low homology to avian rotaviruses was determined, whereas the other segment sequences are chicken-like. This may indicate reassortment of a chicken rotavirus with another rotavirus from an unknown source. Analysis of further genome segments and screening of human isolates for avian rotavirus sequences will be necessary to assess the zoonotic potential of avian rotaviruses.

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