Cryptosporidium parvum: infectivity and pathogenicity of the 'porcine' genotype - DTU Orbit
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Genetic studies have demonstrated profound differences between the 'porcine' genotype of Cryptosporidium parvum, versus 'human' and 'bovine' genotypes. The study analysed infectivity and pathogenicity of the 'porcine' genotype (CPP-13 isolate) of C. parvum, and compared the results with published data on the 'bovine' genotype (CPB-0 isolate). This was investigated in calves and piglets from commercial herds. Piglets were mildly affected by the CPP-13 isolate, contrary to piglets infected with the CPB-0 isolate, which caused diarrhoea of a mean duration of 3.5 days. CPP-13 produced no or very mild clinical signs in piglets despite the excretion of high numbers of oocysts. Concomitant infection with rotavirus, however, caused a dramatic aggravation of the clinical signs, and 5 of 6 experimentally infected piglets died. CPP-13 appeared to be adapted to porcine hosts as illustrated by the lack of infectivity to 1 experimentally inoculated calf, and the absence of clinical signs, the long pre-patent period (15 days), and the excretion of very low numbers of oocysts following experimental infection of another calf. Thus, in accordance with other molecular studies, our results support the genetic evidence for the existence of a new species of Cryptosporidium adapted to pigs.

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Contributors: Enemark, H. L., Ahrens, P., Bille-Hansen, V., Heegaard, P. M. H., Vigre, H., Thamsborg, S., Lind, P.
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