CRYPTOSPORIDIUM SPP. IN FAECAL AND WATER SAMPLES IN AUSTRIA

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Several cases of cryptosporidiosis have been found in patients and in animals, and Cryptosporidium parvum-oocysts were detected in water samples in Austria during the last years. In a retrospective study the reliability and the efficiency of different techniques for the detection of Cryptosporidia in different kinds of samples were investigated and verified, and the distribution of three Cryptosporidium species in Eastern Austria was determined. Oocysts of Cryptosporidium were detected by appropriate staining techniques, enriched by immunomagnetic isolation, and differentiated by a modular arranged gene amplification procedure. Epidemiological data were accumulated and processed statistically. Standard staining techniques for the detection of Cryptosporidia are unsuitable in epidemiological studies, mostly due to insufficient sensitivity and the lack of any ability for a species differentiation. Cryptosporida are found in all kinds of samples in a bimodal seasonal distribution pattern. Drinking water from protected sources in sparsely inhabited areas is rarely contaminated with these parasites. Moreover, the occurrence of Cryptosporidium in Austria is probably more associated with high human population densities in an area than with cattle breeding or water recycling.