

THE PATHOGENIC POTENCY OF ROTAVIRUSES

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Animals and man may become infected with rotaviruses of different species. Rotavirus was found in the faeces of infants during an outbreak of gastroenteritis by electron microscopy (EM). A gnotobiotic piglet 24-hours-old was inoculated perorally with a germ-free human rotavirus suspension. The piglet was kept under sterile conditions and given liquor and libitum. Within 16 hr post-inoculation the animal developed severe diarrhea, typical rotavirus particles were seen in the faeces by EM. The animal died 48 hr post-inoculation.

In another experiment the experimentator has inoculated himself per os with 1 ml of refined swine rotavirus suspension. The number of rotaviral particles according to EM was 1×10^{11} per ml. Diarrhea developed within 14–16 hr post-inoculation. The general state was not radically changed. The function of the gastrointestinal tract became normal within 24 hr since the appearance of clinical symptoms. In the faecal specimens obtained at 5 and 12 hr since the beginning of diarrhea rotavirus was found with the help of EM. The presented data show the real possibility of human and animal cross-infection with rotaviruses and are of great epidemiological and epizootological importance.